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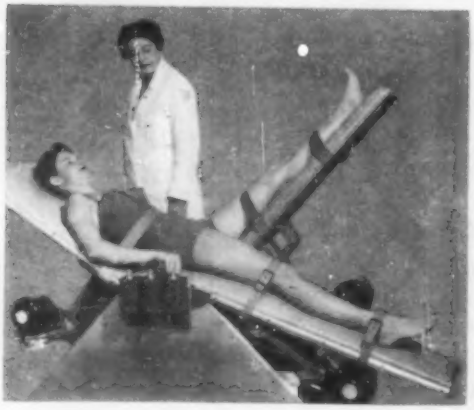

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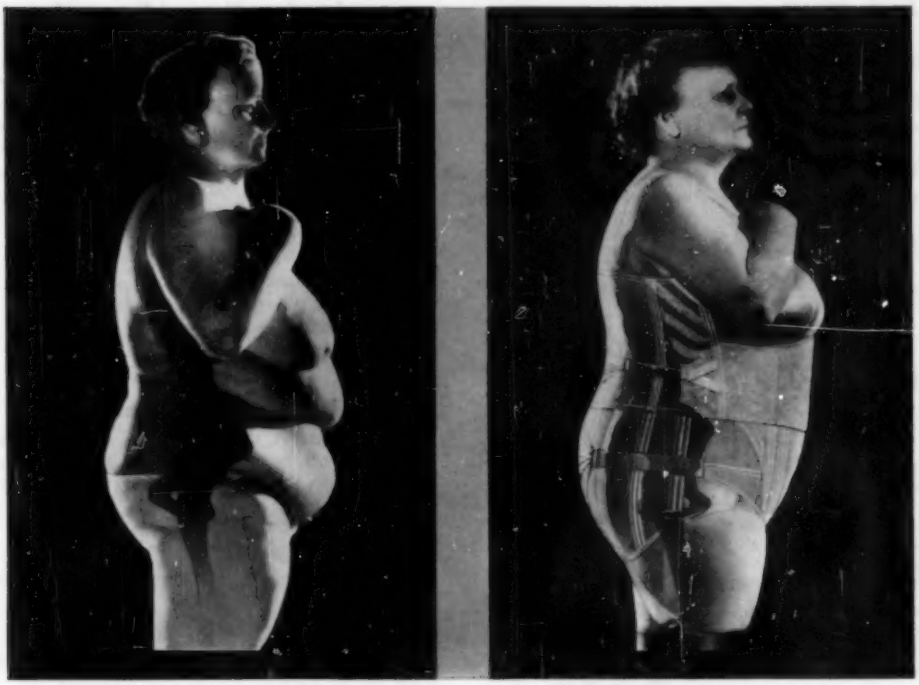

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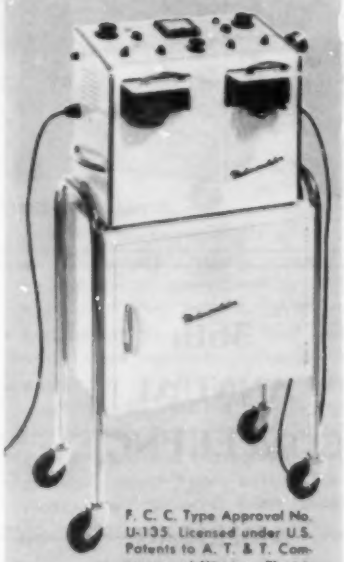

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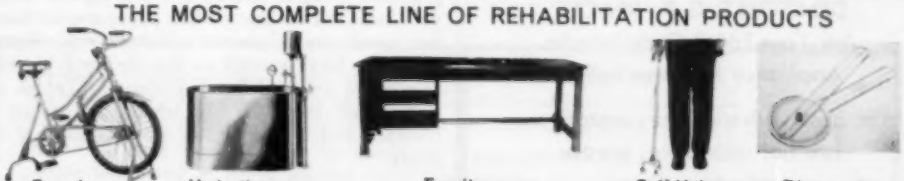

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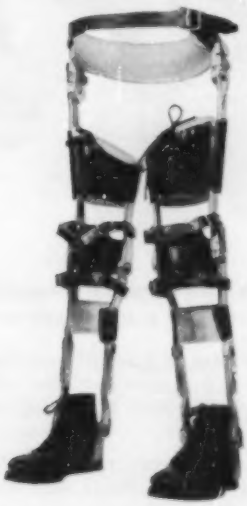

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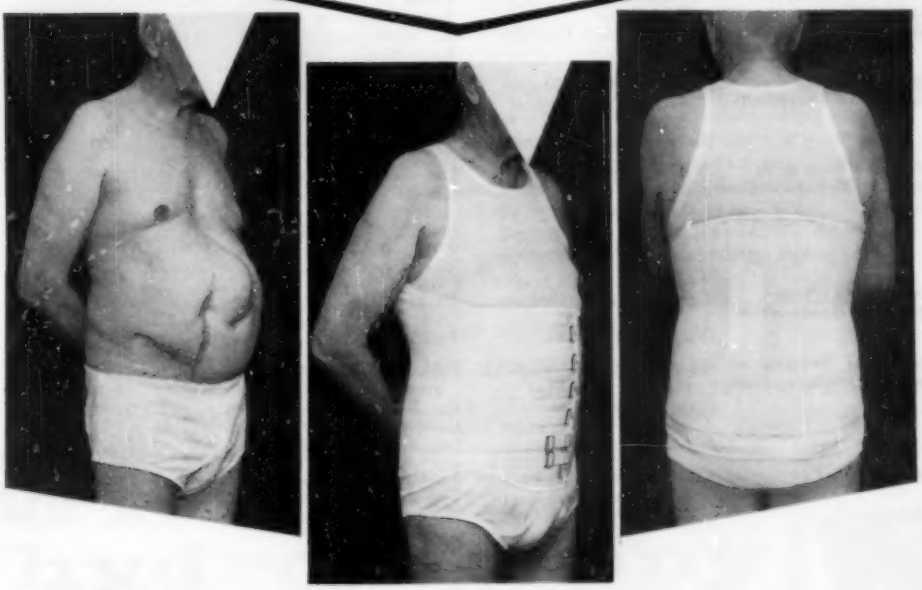

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Postgraduate Course in Technics of Treatment	Children's Rehabilitation Institute for Cerebral Palsy Reisterstown, Maryland	Christopher H. Wiemer Executive Director Children's Rehab. Inst. Reisterstown, Maryland	Jan. 5—March 29, 1959 Apr. 6—June 19, 1959 July 6—Sept. 18, 1959 Oct. 5—Dec. 18, 1959
Advanced Course in Physical Rehabilitation Methods	NYU-Bellevue Med. Cen. and NYU Sch. of Education	Mrs. Edith Lawton, Dir. Courses for Physical Therapists Institute of P. M. & R. 400 E. 34th Street New York City, N. Y.	Feb. 2—Feb. 27, 1959 Apr. 27—May 29, 1959
Technics of Neuromuscular Reeducation	California Rehabilitation Center Vallejo, California	Margaret Knott Chief P. T. Calif. Rehab. Center Vallejo, Calif.	January 1 April 1
Functional Bracing of the Upper Extremities	U. of California and U. S. Office of Vocational Rehabilitation	Prosthetics Education Program Rm. B4-229, Medical Center University of California at Los Angeles 24, California	Feb. 16—20, 1959 Apr. 20—24, 1959
Above-Knee Prosthetics	Postgraduate Medical School & College of Engineering New York University	Prosthetics Ed. Program New York University Postgrad. Medical School 550 First Avenue New York 16, N. Y.	Jan. 12—23, 1959 March 2—13, 1959
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	U. of California and U. S. Office of Vocational Rehabilitation	Prosthetics Education Program Rm. B4-229, Medical Center University of California at Los Angeles 24, California	June 1—5, 1959
Neurophysiological Bases for Rehabilitation	U. of Pennsylvania and U. S. Office of Vocational Rehabilitation	Helen L. Bouman School of Allied Medical Professions University of Pennsylvania 3901 Pine Street Philadelphia 4, Pa.	Jan. 26—Feb. 6, 1959
The Physical Therapist's Role in the Treatment of the Geriatric Patient	U. of Pennsylvania and U. S. Office of Vocational Rehabilitation	Helen L. Bouman School of Allied Medical Professions University of Pennsylvania 3901 Pine Street Philadelphia 4, Pa.	March 9—13, 1959

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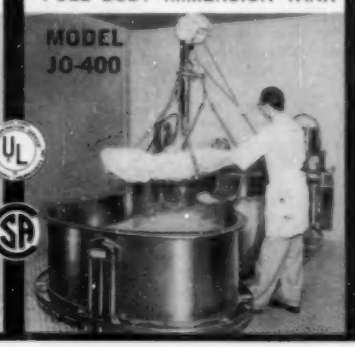

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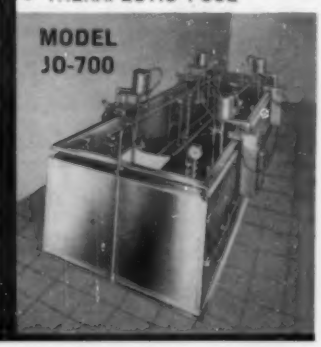

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The Medical-Legal Relation of Injury to Spinal Arthritis. Theodore Willis, Ohio State M. J., 54: 1052-1056, August 1958

Treatment and Rehabilitation of Rheumatoid Arthritis. D. A. Donio and S. Horoschak, Rheumatism, 14: 68-74, July 1958

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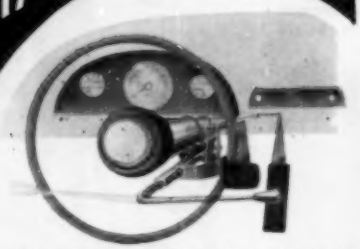

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ORIGINATORS OF THE "WALK-OFF" PHYSICAL THERAPY TABLE

The Physical Therapy Review

Official Publication of The American Physical Therapy Association

*A Professional Inventory**

Marian Williams, Ph.D.

Abraham Lincoln once said, "If we could first know where we are, and whither we are tending, we could better judge what to do, and how to do it." A periodic inventory is a healthy thing, not only in our personal lives but also in the development of a professional group.

Last month I had the privilege of attending a meeting in the Middlewest at which I met for the first time a physician who is well known to all of us through her research and publications in the field of physiology and physical medicine. In the course of the meeting, at one of the recesses between sessions, this physician said, "You physical therapists are asking to be recognized as professional people; why don't you *act* like professional people?" Since I had not met her previously I was a little startled by the frankness of such a question. But I think this incident points up very well some of the things we should discuss, and her question deserves a great deal of consideration on our part.

Just what is meant by "professional"? Lengthy and frequent writing on this subject has been done, but the term and the concept are still difficult to define. In the field of medicine an important milestone was Abraham Flexner's [1] famous report to the Carnegie Foundation in 1910 in which he introduced the concept that a professional field is one which encompasses a specialized body of knowledge different from that of other fields.

Associate Professor, Division of Physical Therapy, Stanford University.

* First Annual Woodcock Memorial Lecture, Northern California Chapter, APTA, instituted in honor of one of its members, Beatrice Woodcock, April, 1958.

An excellent reference to help us in setting up some guide posts is a recent publication of the Department of Health, Education, and Welfare of the U. S. government called *Education for the Professions.*[2] This text, published in 1955, was organized and edited by Lloyd Blauch, Chief for Education and the Health Professions. In it 34 professions are described with reference to their activities and scope, the history of their development, numbers of trained personnel, educational programs offered, and current professional problems. Occupational and physical therapy are cited in the introductory text along with psychiatric social work as examples of very new professions in our society. Three general hallmarks are said to be commonly attributed to a profession:

1. Study and training are necessary for entrance into the field.
2. Success in the field is measured not by financial return but by accomplishment in serving people's needs.
3. Members of a profession organize into groups or associations in order to carry out certain functions.

Let us consider these three hallmarks of a profession as they pertain to us. We may not arrive at any conclusions and we will no doubt raise more questions than we answer, but our purpose is to bring some fundamental points to the attention of all of us and to emphasize their importance.

1. *Study and training* . . . The principal distinguishing characteristic of a profession is the possession

> of a body of knowledge, a set of attitudes, and a group of skills . . . which enable(s) the members to perform a particular type of service.

The margins of the body of knowledge of some of the associated medical fields—or at least the applications of this knowledge—may sometimes appear to be indistinct. No doubt this is because some of these fields are still new and rapidly changing and they are developing in a medical environment which itself is rather revolutionary. In relation to physical therapy, for example, one hears that in a certain type of facility throughout the country the physical therapist may be limited to application of heat and massage while therapeutic exercise and gait training are done by recreation or other personnel. This would seem to be a tremendous waste of training and a source of frustration to the physical therapist. As another example, in some quarters it is believed that manual muscle testing is a diagnostic procedure and thus should be done only by the physician. At the other extreme, I have heard experienced physical therapists remark that in certain instances they were obliged to take responsibility beyond the limits of what they considered themselves trained and competent to do. A proposal relating to the proper boundary between occupational and physical therapy has been that the physician should give prescriptions for arms to the occupational therapist and for legs to the physical therapist. Surely we can find a more appropriate basis than this for distinguishing between the services of our two groups. Both physical and occupational therapy are closely related to the new medical specialty of physical medicine in that members of each group are directly concerned with the treatment of the patient's physical disability during his recovery period. This has led to problems of delegation of responsibility in some instances.

These, however, are relatively superficial considerations. There will no doubt always be variations in responsibility in any given treatment center according to the background, interests, competence, and aggressiveness of the particular persons concerned. The basic challenge relating to this area of professionalism has been well stated by Dr. Worthingham in the lead editorial appearing in the December, 1957, *American Journal of Physical Medicine*:[3] "Many [in the associated medical groups] fail to realize that to call themselves professional does not of itself entitle them to such a designation. Members of a profession must possess a body of knowledge which is identifiable and different from that of other professions. They must also assume responsibility for adding to that body of knowledge and for developing professional standards of education and practice." This leads us to another point under the first hallmark of a profession which has to do with education and certification.

> The scientific or institutional knowledge, the attitudes, and the technique or method of procedure . . . have been organized in a program of professional preparation that is . . . appropriate to a university. The course of education and training is a combination of theory and practice which is enforced through a series of educational requirements and in many instances an examination system provided by the State. The extent of education preliminary to entrance upon practice represents, as a minimum, graduation from a professional college or university.

The Northern California Chapter of the American Physical Therapy Association is fortunate in having two well established university schools of physical therapy in its midst. The bonds between schools and the Chapter fortunately are close. Many members are graduates of these programs. The cooperation of supervisors in affiliated hospitals and clinics who accept students for clinical training makes it possible for the schools to function. This cooperation has always been superb. School personnel, in turn, have served almost continuously on the executive committee of the Chapter in some capacity. Speakers have been drawn from various departments of these educational institutions for Chapter programs, institutes, and conferences. Our efforts in the State Legislature have been helped tremendously by the fact that training programs are located at the University of California and at Stanford University. Furthermore, when the State examination system for physical therapists was instituted in 1954, with oral and practical sections, many persons were available as examiners from both clinical affiliations and school staffs who had experience in testing and evaluation procedures.

There are numerous administrative and operational problems associated with a physical therapy educational program. Although most of these are much too complex to consider in this brief review, a few are of concern to all of us as Association members. One problem which can be readily appreciated is that of revising the curriculum to keep up with and anticipate the needs of a constantly changing field. Another is adequate staffing. Our own schools are fortunate in that they are on the West Coast which is a popular place to live and work. The need for teachers in schools of physical therapy threatens to be critical for a long time to come. Every

person who believes he or she might enjoy teaching and who could make a contribution in this area should consider entering this branch of professional work.

Strengthening of our academic programs and teaching personnel is vital to the development and acceptance of our professional fields. Fortunately, financial assistance is available to those who are willing to undertake further study and thus improve their qualifications. In an academic environment the status of the program is tied to the academic status and professional activity of its representatives in the institution. The premium placed on faculty accomplishment in research and publication is well-known. Those in administrative and teaching positions should be allowed *time* for preparation of teaching materials, library investigation, research, and for broadening of their general and specialized educational background. This is a huge problem, with budgets as they are, but if we belong in a college or university, where promotion depends on these activities, then we must abide by the rule of educational institutions at this level. We must produce people who are interested and competent to perform these activities, and a way must be found somehow for them to be given the time and means to do so.

As has been mentioned, a profession controls its own educational practices. In order to assume a professional role, physical therapists in the schools must not only be capable in the area of administration but willing to accept responsibility for educational development.

The second hallmark of a profession has to do with recognition of services:

> 2. *Measure of success* . . . although the services rendered by (the members of a profession) are performed for a fee or a salary, their success is not measured by financial standards but rather by accomplishment in serving the needs of people. Their main driving force is professional spirit rather than the desire for gain; the true measure of their success is the quality of the service they render, not the financial gain they amass . . . A truly professional man is a dedicated man; he espouses the high ideal of service to his fellow men; he is devoted to his art.

I do not believe that this statement is meant to imply that there is necessarily an inverse ratio between income and good patient care, nor that there should not be fair payment for services rendered. There is no reason why those who are dedicated should not also be rich. But we should not lose sight of true professional values. The therapist who contributes a new form of treatment, develops a new area of the field, designs equipment, leads the way in solving major administrative problems or investigates basic or clinical problems, advances the field. All therapists who consistently and conscientiously care for patients, who establish good interprofessional relations and who demonstrate irreproachable professional attitudes are deserving of credit. On the other hand, a therapist whose primary interest is financial gain to the detriment of good patient care is not only an unprofessional person but is doing a disservice to the rest of the group. This concept has nothing to do with a code of ethics. This concept deals not with a superimposed police statute but rather with the member's inner mainspring of motivation. Each of us must be his own judge of himself in considering this criterion of professionalism.

The third hallmark deals with professional organizations.

> 3. *Associations* . . . Members [of a profession] act collectively to organize associations through which they maintain and improve its service. From one another they draw inspiration and learn new ways of performing their services; to one another they freely contribute their ideas, their discoveries, their inventions . . . associations promote a high standard of professional character and honorable practice.

We are familiar with many of the activities listed by Blauch as Association responsibilities. Among these are development of high standards of practice and a Code of Ethics, providing for the sharing of knowledge and experience through conferences, seminars and clinics, and making available to the public authoritative information and advice concerning the profession. In addition to these well established functions our own Chapter has been active in interprofessional relations and the recruitment of students and has played an important legislative role in the State. The Chapter's annual reports given each spring reveal a tremendous amount of time and effort expended by members. We have been fortunate in the number and caliber of members willing to undertake responsibility as officers, committee chairmen, and of serving on committees.

Ethical practice has received attention on national and chapter levels. The Association's Judicial Committee was instituted in 1954 for the purpose of interpreting sections of the Code of Ethics and taking action when infractions by members are reported. The Code itself was last revised in 1957. Locally, a Chapter Public Service Committee has been created to handle, among other things, problems relating to patient service.

The response of chapter members to programs

at meetings, conferences, and institutes has been gratifying. The support given the two institutes sponsored each year by the Committee on Education is a good example. There is evidence of a healthy interest on the part of chapter members in avenues of continued education and opportunities to obtain new knowledge. Many of our members have taken graduate courses and at least two have recently gone abroad for special study.

Two areas of activity which are responsibilities of a professional association have been reserved until the last for special consideration. These are: (1) fostering and support of research related to the field of service, and (2) creation of a body of professional literature. As might be expected in new clinical fields such as ours, we are still neophytes in writing and research. This is not surprising since most of us have been trained with more emphasis on "how-to" than on "why." When we appreciate how important the areas of communication and research are to a profession, and see our deficiencies in their proper perspective, I believe we will be anxious as individuals and as members of the Association to develop our abilities and to look for opportunities in these areas.

A number of us heard Dr. Hines'[4] thought-provoking talk at the 1950 Annual Conference in Cleveland in which he emphasized the importance of research to a profession. He grouped the functions of a profession into three main categories: service, teaching, and research. In the growth of a professional group in the health arts and sciences, he pointed out, research usually lags behind the other two functions. I believe this is a point which might be stressed here. We need not *at present* be apologetic because we do not have a strong research program in our field. Apparently our sister societies abroad find themselves in similar stages of development, as evidenced by an article which appeared last year in the English publication, *Physiotherapy*. The article was called "Research in Physiotherapy" and was reprinted from the *Australian Journal of Physiotherapy* of the previous year. The author, Dr. Gandevia,[5] of the Royal Australian College of Physicians, states:

> Those of us who are charged with the care of the sick in any capacity whatever have a duty and responsibility to study and to investigate all possible methods of treatment for the benefit of our patients ... We must refuse to accept as a satisfactory answer any statement of opinion or textbook authority which is not supported by quoted factual evidence. Do not reject a subject (for investigation) only because you feel that it is beyond your resources or your capacity; some aspect of the problem can be found to which even the humblest of us can contribute something. Do not think that because the subject is not a new one there is nothing new to be found about it.

The author then describes in detail three clinical studies relating to poliomyelitis, osteoarthritis, and varicose ulcers, pointing out in a masterful fashion how each illustrates the principles of a controlled investigation of a therapeutic regimen. Most important, he demonstrates how this type of investigation can be done by an individual physical therapist or by a large hospital staff. He concludes, "In our experience physiotherapists in Australia or abroad have not yet seized the magnificient opportunities for research work which lie open to them."

A point often emphasized is the value of research not only to a profession but to an individual in that it instills in him a "certain attitude of mind." This could be interpreted that training in scientific method, which involves asking basic questions, making systematic observations, analyzing and evaluating data, and thereby reaching objective conclusions, makes a therapist a better practitioner. It certainly makes him a better teacher as well. He puts more stress on evidence, on the "why" to balance the "how-to." In looking for answers to questions relating to treatment rationale he is stimulated to make observations of his own and to figure out ways of getting the answers. No one is in a better position to frame problems and to collect data than the physical therapist or occupational therapist who sees the patient day after day throughout his treatment period. If a proposed investigative project is sound, the cooperation of the referring physician should be obtained easily, as well as that of other personnel whose advice or collaboration could be helpful.

Our schools can do a great deal to instill a habit of critical thinking about treatment procedures, even though many of the answers have not been found in a field such as ours and some technics doubtless will continue to be used on an empirical basis. New experimental findings in related fields such as neurology and physiology should be digested and applied whenever possible. It is always heartening to hear an instructor say, "Studies have shown ...."

At this point the discussion might be broadened to include the whole field of communication of professional ideas. Two steps toward increasing communication between members have been initiated by the Chapter this year. One is the Woodcock Memorial Lecture, in which the precedent has been set of inviting a member to speak. Another is an essay contest in which

prizes have been offered for original contributions by members. These are steps in the right direction.

On a national level, participation of members as instructors at the annual educational institutes sponsored jointly by the Office of Vocational Rehabilitation and the American Physical Therapy Association has demonstrated that physical therapists can do a competent job of preparing and presenting material when asked to contribute. This has been true also of members who take part in the Annual Conference programs. The problem is to get more members to participate.

Communication of ideas as a professional responsibility was the subject of a provocative article by Dr. Hellebrandt [6] in which she stated:

> Important among the many reasons why professional associations exist is the fact that they provide channels for that exchange of ideas without which growth would be impossible or seriously hampered. The route taken ... may be oral, audio-visual, or written ... The majority of papers appearing in society sponsored journals are works read at the last annual meeting of the supporting professional group ... It is interesting to speculate as to what would happen if 10 per cent of the Association's membership, or even one in a hundred, accepted the challenge of preparing and reading a formal paper as an annual professional obligation. Refresher courses and instruction seminars are admirable convention devices but they should never be allowed to take the place of original contributions made by physical therapists from the stuff of their individual experience and independent thinking.

The author goes on to say that subjects discussed might include not only summaries of more formalized scientific research, which may be undertaken by a relatively small number of persons in the Association, but also reports from any member on such topics as case histories, problems in supervision, results of treatment, employment policies, and methods of effective in-service training. It might be added that reports of treatment technics, equipment adaptations, administrative policies and the like which were tried and found *not* to work would also be valuable to other members.

In order to make this report to you, I made a superficial survey of the active members of the Chapter to find out what they may have done in the way of publication and research. I think the returns will interest you.

Returns on questionnaire	177	(60%)
Number reporting publications (articles or books)	26	
Number reporting research activity	27	

The titles of publications indicated a wide variety of subjects covered. It is not possible to reproduce all of these here, but a sampling will illustrate the diversity of interest:

- Glossary of Scientific Terms in the Field of Cerebral Palsy
- Balance Training in Cerebral Palsy
- Electrical Stimulation of Muscle Groups
- Use of Wall Pulleys and Mat Exercises
- Technics of Neuromuscular Facilitation
- Case Report: Restoration of Function Following Severe Injuries to Lower Extremities
- Use of Springs in Objectively Evaluating Muscle Strength
- Meaning of "Strength" in Physical Medicine
- An Adapted Progressive Resistance Exercise Device
- Crutches for the Spastic Quadriplegic
- Staircase Apparatus
- Scoliosis: Treatment by Derotation
- An Exact Technic for Clinically Measuring and Recording Joint Motion
- Patient Instruction — Covering Methods of Teaching Students How to Give Adequate Oral and Written Instructions to Patients and Their Parents

Beatrice Woodcock, in whose name this Memorial Lecture was established, wrote a book on *Scoliosis*, which has become a classic in the treatment field. In it she recorded the results of her extensive reading, her careful clinical observations, and passed on to us her suggestions for treatment procedures. This exemplifies a truly professional spirit. Among the research studies reported by Chapter members were:

- Electromyography of breathing muscles
- Recovery of muscle strength and range of motion in patients with knee disabilities
- Observations of postsurgical chest cases
- Nerve supply of the biceps brachii muscle

There is an old saying to the effect that one's education does not stop when he leaves school. This is one of the most important points for us to appreciate as members of a fast growing profession. It does little good for us to take stock of ourselves unless we are willing to work to overcome our professional deficiencies, both as individuals and as Association members. An editorial in a current journal states: [7]

> There is a tendency to identify the standards of a profession too exclusively with the standards required for admission to it. It is true, of course, that standards required for admission are important ... Yet it is not through them that a profession makes its impact upon the world. The ordinary person—including, emphatically, members of other professions—take these basic qualifications for granted ... What counts far more in the public eye is the attitude and skill of individuals encountered in the professional relationship ... Status is not something which can be conferred like a university degree or a professional qualification; in some measure—perhaps in large measure—it is determined by oneself—by one's work, outlook and maintenance of what might be called an adult, or educated, point of view.

Granting this, it might be in order to conclude with some specific suggestions. First, as individuals, we can consider how we best fit into the picture of professional activity and contribute our full share. We may, for example, serve on chapter committees, make a special effort to acquaint co-workers with our field and in turn become better acquainted with theirs, recruit students and, when we have a contribution to make, write an article or a book. In relation to research we may keep ourselves informed by reading, by observing work being done around us, by cooperating in research programs whenever we can contribute, or we may carry out projects of our own. We can each upgrade our abilities in the field by broader reading, by learning new technics, by trying constantly to clarify our understanding of treatment rationale and by communicating our ideas. If self expression is a problem, it might help us as individuals to join one of the various discussion groups now being organized in many communities, or to take a course in public speaking. Courses in writing or in basic English may also be in order to remedy deficiencies in communication.

The chapter on its part might consider two steps which in my opinion the group is ready to take. The first is to initiate a policy of calling upon the membership itself for at least a fair share of program material. The second is to create a committee or subgroup whose duty it is to keep informed on what members are doing in writing and research. This group could provide consultation and advice, if a member requests it, or give editorial assistance as needed. In this way a local clearing house for information would be made available.

If a program such as this were initiated, I think it would have a tremendously stimulating effect. We should consider not only the contribution a member-speaker can make to us, but the development of the abilities of the person himself in organizing material, in writing, and in speaking. How better can we learn? Our secret weapon in this campaign can be an invitation from the Executive Committee to talk to the chapter. I think we would be surprised at the favorable results such a program would have.

Finally, there are two suggestions at the national level: (1) a letters-to-the-editor column in the *Physical Therapy Review*, which would encourage members to read more critically and to express their comments and opinions; and (2) some arrangement at the Annual Conference whereby members could give a brief paper to a small group. The prospect of facing several hundred people with a formal paper seems so formidable to many members who have something valuable to say, that they simply will not consider it. If a series of concurrent sections were planned at which a 10 to 15 minute paper could be given to 40 or 50 persons at the most, I believe many more members would be willing to participate. We have been more severe on ourselves in this respect than some of the well established basic science and professional groups where very brief papers—usually summaries of longer reports—are given to relatively small segments of the membership.

We have pointed out some guideposts for gaging our progress toward professional maturity. When our status is challenged, we should be able to judge such criticism in the light of our strengths and weaknesses. Where this criticism is justified we should not take offense; we should correct the weakness. We must learn to rely more upon ourselves. Associations are formed so that members may *share* their knowledge. Our goal should be to be able to say truly that from one another we draw inspiration and learn new ways of performing our services—that to one another we freely contribute our ideas, our discoveries, our inventions.

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The Influence of the Oscillometer Test on the Histamine Wheal Test

Dorothy I. Briggs, M.S.

There are many tests and methods used for the evaluation of the efficiency of the peripheral deep and superficial circulation.[1] There is controversy throughout the literature regarding the reliability and usefulness of some of these tests. This paper is concerned only with the possible influence of the oscillometer test on the histamine wheal test. In an attempt to increase the circulation, intermittent venous occlusion has been used as a form of treatment. It is possible that by occluding the part to perform the oscillometer test, we are inadvertently increasing the circulation by this intermittent occlusion.

Lewis [2] has described the histamine wheal test and the interpretation of the results in detail. Allen, Barker and Hines [1] have not used the histamine test for a number of years, feeling that it is not sufficiently reliable for clinical practice. Kramer [3] states that he believes the histamine test to be an acceptable and reliable procedure. Abramson [4] states that the histamine test is dependent upon cutaneous blood flow and therefore is no index of the state of the circulation in the muscles. DeTakats [5] has said that the most important function of the test is to determine the level of amputation in cases of arteriosclerotic and diabetic gangrene. Starr,[6, 7] among the first to utilize the histamine response as an evaluation of circulation, felt that it demonstrated the presence or absence of collateral circulation in cases of sclerotic narrowing of the large arteries. The interpretation of the significance of the time delay between injection and the development of the wheal varies somewhat with different authors.

The oscillometer as an index of deeper circulation has been used in this country since 1927 by Samuels [8] and others. Samuels states that it is a useful tool for the evaluation of pulsations of the deeper vessels and can be used to follow the progression of certain circulatory diseases. The range of normal values for oscillometry varies somewhat with different authors.[9, 10, 11] Within recent years work has been done by Samuels [12] on the development of a more sensitive oscillometer. This instrument is not yet available for general use. Allen, Barker and Hines [1] state that the oscillometer has proved of little value since the readings obtained differ widely under varying circumstances. However, we have found the oscillometer test useful as a comparison between extremities on the same patient and as a method of following the progression of disease in certain other patients.

During the period January, 1951 to June, 1956 the Section of Physical Medicine at the University of Wisconsin Hospitals administered peripheral vascular evaluation tests in the form of oscillometric readings and histamine wheal tests to 359 patients. The standard method arbitrarily selected has been oscillometric readings followed by the histamine wheal test. Both

TABLE 1

PATIENTS AS TO DIAGNOSIS

Generalized arteriosclerosis	139
Diabetic arteriosclerosis	57
Buerger's disease	65
Intermittent claudication	33
Raynaud's disease	11
Rheumatoid arthritis	11
Scleroderma	7
Neuritis	7
Osteomyelitis	6
Venous stasis ulcer	4
Gangrene secondary to occlusion following surgery	3
Cervical rib	2
Thrombophlebitis	1
Fractured femur	1
Cardiac septal defect	1
Sacral pain	1
Varicose veins	1
Hodgkin's disease	1
Congenital anomaly of femoral arteries	1
Acrocyanosis	1
Angiospasm	1
Hemangioma	1
Deferred	4
TOTAL	359

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TABLE 2

SERVICES REFERRING AND NUMBER OF PATIENTS

Medicine	183
Surgery	155
Neuropsychiatry	8
Allergy	2
Orthopedics	9
Pediatrics	2
TOTAL	359

are given during the same visit to the department. It should be stated that these tests are not the only criteria used at this institution to establish the presence or absence of adequate peripheral circulation, but are adjuncts to studies carried on by other services. The oscillometer and histamine wheal tests are thought to be of value by the referring services.

A review of the results of tests on these 359 cases was made. There were 273 males and 86 females in the group. The age range was from 16 to 83 years. The age-sex distribution was approximately equal. Table I shows the distribution according to primary diagnosis. Table II gives the distribution of referring services showing a wide usage of these tests in this institution.

Of the 359 cases tested, 13 per cent showed good results in both tests. Fifty-four per cent had deficiencies of the peripheral circulation manifested by poor results in both tests. Thirteen per cent showed good oscillometric readings and poor histamine wheal test results. This might be explained in certain pathologies where the superficial circulation is involved but the larger vessel circulation is still adequate. Twenty per cent showed good to normal histamine wheal tests accompanied by poor oscillometric readings. The question then comes to mind whether or not the oscillometer is influencing the result of the histamine wheal test.

METHOD

For this study 25 normal subjects, 10 males and 15 females, were selected, ranging in age from 21 to 71 years. In the older subjects the peripheral circulation was clinically normal for their age since none had any symptoms relating to decreased circulation.

The subjects were placed in a recumbent position for 15 minutes prior to the tests for stabilization. The lower extremities were left uncovered during this period. The blood pressure was recorded at the end of the stabilization period. The instrument used for the oscillometer

TABLE 3

RESULTS OF OSCILLOMETER AND HISTAMINE WHEAL TESTS ON 359 PATIENTS

	Patients	*Per cent*
Poor results in both tests	196	54
Good results in both tests	47	13
Oscillometer good, histamine poor	46	13
Histamine good, oscillometer poor	70	20

test was the Collens Sphygmo-ocillometer. Using the standard procedure, oscillometric readings were taken above the knee, below the knee, at midcalf, ankle and on the dorsum of the foot. The length of time that the part was actually occluded above diastolic pressure was recorded for each site. All readings were performed by an operator familiar with the instrument and an attempt was made to take the readings as rapidly as possible and still insure accuracy.

For the histamine wheal test, a total of .6 cc. of a standard solution of histamine phosphate 1/2000 + .5 per cent procaine was used. All injections were intracutaneous and were done by a nurse skilled in the procedure of intracutaneous injection. Each subject was injected at three preselected sites on each lower extremity; 6 inches above the knee, on the lateral aspect of the leg halfway between the tibial tuberosity and the lateral malleolus, and on the dorsum of the foot proximal to the venous arch. The exact time of injection was recorded.

The oscillometer readings were taken first on the left lower extremity. Immediately following this the histamine was injected into the preselected sites on both lower extremities. The wheals resulting from the histamine were recorded by tracing on blank X-ray film directly from the patient's skin at 2.5, 5.0, and 10.0 minutes after injection. The left lower extremity was then tested with the oscillometer and the occlusion times and the oscillometric readings recorded. Forty-eight hours later the tests were repeated. Beginning with the left lower extremity, oscillometrics were performed on the left, histamine was iniected into both extremities, wheals were recorded, and oscillometrics recorded on the right. Each subject thus acted as his own control.

The tracings of the wheals were enlarged using a photographic enlarger with a magnification of 2. The enlarged spots were traced on blank paper. The area of each spot was measured using a compensated polar planimeter. The enlargement was done to increase the accuracy of the planimetric method. The area of each spot

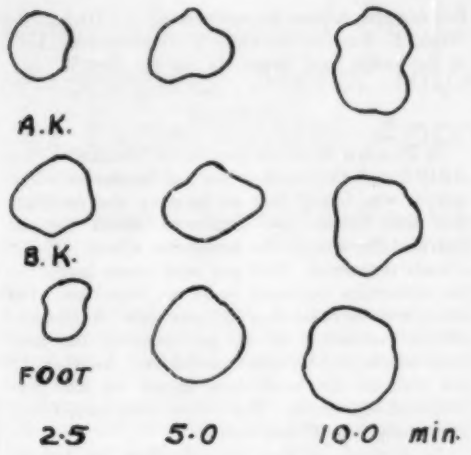

Figure 1. Histamine wheal before oscillometer. Patient P. H., age 60, left leg. Wheals traced directly from patient's skin.

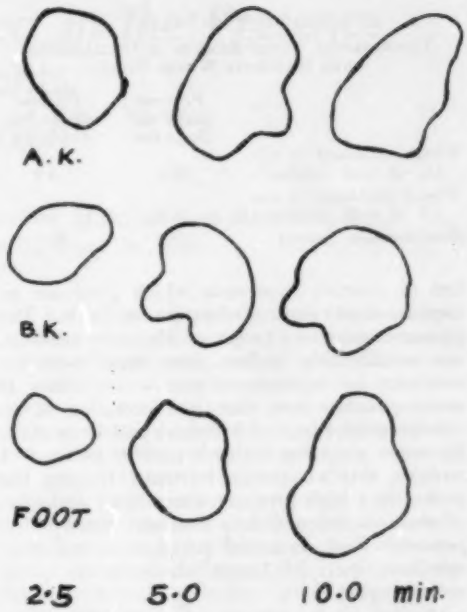

Figure 2. Oscillometer before histamine wheal. Patient P. H., age 60, left leg. Wheals traced directly from patient's skin.

was recorded in square centimeters. A comparison was made between the area of the wheals in the extremity occluded by the oscillometer before injection and the area of the wheals on the extremity not previously occluded. The wheals were compared, left and right, at 2.5, 5.0 and 10.0 minutes.

RESULTS

Using 25 subjects, a total of 300 wheals were measured. There was no significant measurable difference (1 per cent or less) between the part occluded first and the nonoccluded part in 4.8 per cent of the wheals. Another 4.8 per cent of wheals were larger on the nonoccluded part (one third of this number occurred on one patient). The wheals were larger on the part which was occluded first in 90.4 per cent of the areas measured. Figures 1 and 2 are typical records showing the difference in whealing between the histamine after prior occlusion by the oscillometer and histamine without prior occlusion on the same leg.

The mean area increase was 45.5 per cent. The 4.8 per cent of the wheals which were larger in the prior nonoccluded part showed a mean area increase of 27 per cent. Table 4 gives this data.

The mean occlusion time for each extremity was 3 minutes and 49 seconds. This represents the total length of time the part was intermittently occluded above diastolic pressure to allow the taking of 5 oscillometric readings. The mean occlusion time for each reading was 49.4 seconds.

Prior occlusion affected the time of appearance of 9.6 per cent of the wheals. The wheals on the extremity occluded before injection appeared earlier.

DISCUSSION

The fact that 90.4 per cent of the wheals compared showed an area increase of 45.5 per cent in the preoccluded extremity seems to indicate that the oscillometer had a significant effect upon the histamine wheal test. Lewis[2] has stated that a cuff placed about an extremity inflated to a pressure above 50 mm. Hg. stops whealing completely. When the cuff is removed, whealing takes place more quickly. This was noted in only 9.6 per cent of the wheals. Perhaps this was due to the fact that our occlusion was intermittent in nature. Also our injections were not done while the part was occluded.

It has been said that intermittent venous occlusion increases circulation through the mechan-

TABLE 4

EXPERIMENTAL GROUP RESULTS OF OSCILLOMETER AND HISTAMINE WHEAL TESTS

	Per cent with Prior Occlusion	*Per cent without Prior Occlusion*
Wheals increased in size (% of total number)	90.4	4.8
Wheals unchanged in size (% of total number)	4.8	0.0
Area increase (mean)	45.5	27.0

ism of reactive hyperemia which produces an increase in the number of patent capillaries. The pressures necessary to get oscillometric readings are considerably higher than those used for treatment by intermittent venous occlusion. It seems possible then, that with occlusion of an extremity for a total of 3 minutes and 49 seconds, the mean occlusion for each reading being 49.4 seconds, that we are inadvertently treating the part with a high pressure intermittent occlusion of short duration with a resultant reactive hyperemia. This increased peripheral circulation manifests itself by larger wheals in the prior occluded part.

Since most clinical interpretations of the histamine wheal test are based on both the time of appearance and the size of the wheal it seems that we should make an effort to rule out any factor that might cause an increase in the size of the wheal. In 25 normal subjects the oscillometer appears to have affected the size of the histamine wheals.

It was also noted that on the 25 normal subjects tested, our oscillometer readings were not well distributed in the range of normal values set up by the manufacturers of the instrument except for the readings taken at the ankle and foot. These values are for the thigh 8—15, below the knee 4—10, calf 3—8, ankle 1—5, and foot Trace—1. Our values were considerably lower. In only 1 subject were we able to get a so-called "normal" reading for the thigh. In 10 subjects we attained only the lowest reading of the normal range below the knee. Twelve subjects showed the lowest normal reading for measurements at the calf. In view of this it would seem that we should lower the normal oscillometric readings for clinical interpretations. It is suggested that the normal values be revised to 3—10 for the thigh, 2—8 below the knee, 2—7 at the calf, 1—4 at the ankle, and Trace—1 for the foot.

SUMMARY

In 25 subjects whose peripheral circulation was studied with the oscillometer and histamine wheal test, it was found that performing the oscillometer test before the histamine wheal test influenced the size of the histamine wheal. Of 300 wheals measured, 90.4 per cent were larger on the extremity occluded prior to injection. The mean area increase was 45.5 per cent. A group of wheals consisting of 4.8 per cent of the total were unaffected by prior occlusion. Another 4.8 per cent of the total were larger on the non-occluded extremity. The mean area increase of this group was 27 per cent.

As a result of this investigation, we believe that when the oscillometer and histamine wheal tests are used for evaluation of the peripheral circulation, the histamine test should always be performed first. This sequence will remove the effect of the oscillometer test upon the histamine wheal test and provide for more accurate clinical interpretation of the test results. A new scale of normal oscillometric values is suggested.

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Can Ultrasound Be Used in the Presence of Surgical Metal Implants: An Experimental Approach*

George D. Brunner, B.S., Justus F. Lehmann, M.D., Jo Ann McMillan, B.S., Katherine E. Lane, M.D., Jack W. Bell

Can ultrasound be used in the presence of surgical metal implants? This question has been asked more and more frequently since modern treatment of fractures and joint diseases has employed more general use of surgical metal implants and metal joint prostheses. A procedure for heating deep structures could be helpful in combating the joint contractures which accompany such surgical repair or restoration. The use of short wave and microwave diathermy is contraindicated because of the possible overheating of the metal implant itself or of the tissues in the vicinity of the implant. Attention has turned to the possible use of ultrasound as the source of deep heating in such cases. Experimental investigations have demonstrated that it is possible to heat selectively fibrous tissue as found in tendons, myofascial interfaces, and scars. The rise in temperature results in increased flexibility of the fibrous tissues.[1, 2] In dealing with the problem of the possible use of ultrasound in the presence of metal implants, first consideration was given to the possible reflection of ultrasonic energy by a metal implant. Such reflection might cause focusing of ultrasonic energy in such a fashion that areas of tissue overheating could result. There was also a question as to whether the metal implant itself would be selectively heated.

To answer these questions, the properties of the various metals used in surgical implants were first studied. A determination of the acoustic impedance of each metal was made, with the anticipation that it would be possible to estimate the approximate amount of ultrasonic energy reflected at the interface between the tissue and the metal implant by comparing the acoustic impedance of the metal with that of the tissues. It was further anticipated that information might be obtained on the amount of ultrasonic energy absorbed by the metal implant itself. The acoustic impedance of titanium and stainless steel was determined and compared with the measurements made previously by Lehmann and Johnson of the acoustic impedance of soft tissue, such as muscle and bone.[3] It became apparent that a marked mismatch existed between the acoustic properties of the metal implants and those of the tissues. Therefore, a marked reflection can be anticipated at the interface of the metal implant and the tissue, and such reflection would constitute a major problem. The amount of the reflection critically depends on the kind of metal used in the implant. Reflection with resulting patterns of standing waves or focusing can produce a local increase in intensity.

The next logical step was to determine whether such focusing and standing waves were actually produced when the metal implants were present in the ultrasonic field. The Schleiren method was used to demonstrate the distribution of ultrasonic intensity, along with the changes in intensity distribution in the field after insertion of various metal implants.[4] Bone screws and plates of various sizes, suture wires, Thornton side plates, Smith-Peterson nails, Küntscher nails, Hanson-Street intramedullary nails, Hegge pins, vitallium hip cups, and Eicher prostheses were checked in this manner. With a sensitized thermocouple probe measurements were taken in order to determine increases of ultrasonic intensity in the area of the focus or in the standing wave. Results showed that an appreciable increase of ultrasonic intensity can occur in front of metal implants as a result of the reflection and focusing and very little of the intensity will pass through the metal implant.[5]

In order to determine whether this increase in intensity would also lead to a corresponding increase in temperature, the temperature distribution in the presence of the metal implants was studied in thigh specimens of pigs. Pigs were

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selected because they are the only animals similar in size to humans. The ratio of skin, fat, muscle, and bone is also comparable to that in humans. The thigh specimens were studied with and without various metal implants, and with varying amounts of skin, fat, and musculature overlying the implants. No appreciable rise in temperature was noted in spite of the increase in intensity as a result of the reflection.[6] In most instances the temperature in front of the metal implant was lower than the temperature observed in the same specimen without the implant. This suggested that other factors were compensating for the increase in ultransonic intensity resulting from reflection at the metal implant.

In comparing the heat conductivity of the metals used in surgical implants it was found that such metals are much better conductors of heat than are bone, muscle, and subcutaneous tissue. This marked difference between the heat conductivity of the metals and that of the tissues supported the assumption that the increase in heat loss due to high thermal conductivity of the metals compensates for the local increase in heat generated as the result of the reflection of the ultrasonic energy at the metal implant.

The data accumulated at this point suggested strongly that it might be possible to use ultrasound as a means of deep heating tissues in spite of the presence of metallic surgical implants. Before such application could be safely considered for human beings, live animal studies had to be made. Using standard orthopedic procedures, metal implants were inserted into live pigs, which ranged in size from 100 to 150 pounds. Bone plates, Smith-Peterson nails, and Küntscher nails were selected for insertion since these implants produce a marked local increase in intensity as a result of reflection. Good postoperative care was given during the period of wound healing. The sutures were removed approximately 10 days after surgery, and a therapeutic dosage of ultrasound was then applied daily for 5 days. At the conclusion of the treatment period the animals were sacrificed. Extensive gross and microscopic studies of the skin, fat, muscles, and bone were carried out to determine the effects of ultrasonic irradiation. The appearance of the treated side was compared with that of the control.

Final evaluation of these data will determine whether or not it is safe to apply ultrasound in the presence of surgical metal implants in human beings. The gross and histological findings presently indicate that there is no destruction of the tissues nor impairment of the healing processes in the treated area.

This brief review is given to indicate the possibilities for research as a basis for applied physical therapy. Active participation of physical therapists in basic research contributes to improvement of our present technics of treatment, stimulates a more critical evaluation of textbook knowledge, and promotes better teaching programs. Thus, such research furthers the growth of the individual physical therapist, as well as the profession as a whole.

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Case Reports

Modified Progressive Resistance Exercise: Thirteen Cases with Prolonged Quadriceps Insufficiency

Mary M. Laughlin, Major, USAF (MSpC)

A modified progressive resistance exercise technic stressing overload was used with 13 selected patients having prolonged quadriceps insufficiency. The hospital in which this treatment was carried out is one established by the Air Force with facilities to retire medically disabled military personnel. Consequently, patients having chronic knee conditions which had been resistant to commonly accepted methods of treatment were referred to this hospital for further evaluation. It was recognized that the individual patient who was unable to lift more than 15 to 20 pounds with his quadriceps could not negotiate stairs, ladders, or drills with the dexterity demanded by the armed services. It was also found that too often this patient had been labeled as being poorly motivated. A policy was established that all male patients should lift at least 35 pounds and all female patients should lift 30 pounds before being returned to duty. Prior to selection for overload exercise the following patients had been receiving progressive resistance exercise with the DeLorme technic of 10 RM (repetition maximum), 3 sets of 10 repetitions each: ½ RM, ¾ RM, and 1 RM. No attempt was made to use the modified exercise procedure with patients showing good results by use of the conventional DeLorme method.

The modified exercise program was performed in the following manner: exercises were performed only twice weekly, on Tuesdays and Fridays. Heat in the form of a hot moist pack was applied to the quadriceps area preceding exercise. A standard aluminum boot with weights attached was used to apply overload. The initial load to be lifted was arbitrarily set at twice the patient's previous 10 RM. Patients were instructed to expend all-out effort until they were able to lift the load through complete extension at least 3 times. Rest periods were allowed when the patient showed signs of fatigue. These twice weekly exercise periods lasted from 30 minutes to 1 hour. When the patient was able to lift the load through complete extension the weights were increased by 10 to 15 lbs. The patient again expended maximum effort until he was able to lift the load through complete extension.

CASE 1

Pertinent data: a male, age 34, had sustained internal derangement of the right knee with torn medial meniscus which was secondary to an old airplane injury. Reinjury occurred 12 years later and surgery with excision of medial meniscus was performed.

Course of exercise: at 5 weeks postsurgery patient was lifting only 17½ lbs.—10 RM. He was then started on overload technic with an initial load of 35 lbs. In 6 days he was lifting 45 lbs. through complete extension.

CASE 2

Pertinent data: a male, age 22, had retained a foreign body, a .22 caliber bullet, in the right knee. Injury was sustained 14 months prior to admission to this hospital.

Course of exercise: after 3 weeks of progressive resistance exercise patient was lifting only 20 lbs. —10 RM and he experienced pain on exercise and walking. He was then started on an overload of 40 lbs. After 9 days he was able to lift 60 lbs. through complete extension and was free of pain.

CASE 3

Pertinent data: a female, age 34, had been operated 26 times for severe infection of the right thigh involving gluteal bursa, femur, and lateral musculature. Surgery necessitated excision of most of vastus lateralis muscle and resulted in extensive deep tissue fibrosis.

Course of exercise: following cessation of the infection the patient had been placed on progressive resistance exercises and had reached a plateau of 15 lbs.—10 RM. She then exercised with an overload of 30 lbs. In 3½ weeks she lifted this load with ease and could lift no more than 30 lbs. with her unaffected leg.

CASE 4

Pertinent data: a male, age 23, had Osgood Schlatter's disease of the left knee. Ostectomy of the left tibial tuberosity was performed.

Course of exercise: patient could lift only 20 lbs. —10 RM at 5 weeks postsurgery. He was then started on an overload of 40 lbs. In 3 weeks he was lifting this load through complete extension.

CASE 5

Pertinent data: a male, age 22, having an internal derangement of the right knee had been treated conservatively for 2 months at another hospital with progressive resistance exercise.

Course of exercise: after 2 weeks of conservative exercise at this hospital he could lift only 25 lbs.—10 RM. He was then started on 50 lbs. overload. After 3 weeks he was lifting this load through complete extension.

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CASE 6

Pertinent data: a male, age 26, had sustained a simple fracture of the anterior spine of the left tibia. There was an internal derangement of the left knee with a tear of the anterior cruciate ligament. He was treated in traction for 1 month.

Course of exercise: after 3 weeks of progressive resistance exercise the patient had reached a plateau of 25 lbs.—10 RM. He was then started on an overload of 45 lbs. In 2 weeks he was lifting this load through complete extension.

CASE 7

Pertinent data: a male, age 27, had suffered a severe injury to his right knee, requiring surgical repair of the medial collateral and posterior cruciate ligaments with removal of the medial meniscus. There was fibrous ankylosis of the knee joint following surgery which was treated with manipulation under anesthesia. At time of admission to this hospital, 3½ months following injury, the range of motion of the right knee was limited in flexion to 40 degrees.

Course of exercise: after 5 weeks of progressive resistance exercise the patient could lift only 15 lbs.—10 RM. His range in flexion however, had increased to 90 degrees. He was then started on an overload of 30 lbs. In 3 weeks he was lifting 40 lbs. through range of motion.

CASE 8

Pertinent data: a male, age 18, had sustained a torn medial meniscus of the right knee which had previously been injured by a gun shot wound at age 14. A meniscectomy was performed.

Course of exercise: the patient was lifting only 12½ lbs.—10 RM after 5 weeks of progressive resistance exercise postsurgery. He was then started on an overload of 25 lbs. In 2 weeks he was lifting 45 lbs. through complete extension.

CASE 9

Pertinent data: a male, age 20, whose initial injury to the left knee had occurred while playing football in high school, sustained second injury after entry to military service which resulted in "locking." A meniscectomy of his knee was performed and the patient had returned to duty at 1 month postsurgery at which time he was lifting 30 lbs.—10 RM. He was admitted to this hospital at 8 months postsurgery.

Course of exercise: after 3 weeks of progressive resistance exercise he was lifting only 20 lbs.—10 RM. He was then placed on an overload of 40 lbs. In 9 days he was lifting 50 lbs. through complete extension.

CASE 10

Pertinent data: a female, age 44, had sustained fractures of the tibia and fibula bilaterally and had been in the hospital one year prior to transfer to this hospital.

Course of exercise: the patient had complete healing of the fractures, but after 4 months of progressive resistance exercise she had not progressed beyond 20 lbs.—10 RM and lacked 10 degrees of complete extension of each knee. She was then placed on overload exercise and after 1 month was lifting 30 lbs. through complete extension of both knees.

DISCUSSION

Three of the 13 selected patients failed to show any marked improvement with use of this overload technic. None of the patients who participated in the overload exercise program showed any sign of ill effects from the strenuous regime. The patients' attitudes and efforts in response to the change in routine was good. It appeared that former lack of progress was not due to lack of motivation. It is felt however, that further studies are needed before this technic is put to general practice in treating weakness of the quadriceps. It appeared that by this method it was possible for a group of patients to return to full military duty who formerly would have been retired and identified as having reached maximum benefit of treatment for residual quadriceps insufficiency.

The author wishes to express appreciation for the direction and advice of Lt. Col. Frederick D. Good, USAF (MC), Chief of Orthopedics, USAF Hospital, Parks Air Force Base, California, in this program of treatment.

Ultrasound Therapy in Supraspinatus Bursitis

Francine B. Bundt, Capt., AMSC

A 55 year old retired male soldier was first seen at the U. S. Army Hospital, Fort McClellan, Alabama, in January, 1957. The patient complained of pain in the right shoulder joint and stated that he had had episodes of severe pain in the last two years.

Abduction of the right shoulder was limited to about 80 degrees, and rotation of the right shoulder was extremely painful but the range of rotation was normal. There was atrophy of the right deltoid muscle. X rays revealed the presence of a moderate sized, somewhat irregular, area of calcification above the greater tuberosity, probably in the tendon of the supraspinatus muscle.

During the period from January through May, 1957, this patient was seen on numerous occasions

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and was treated with hydrocortone injections, novocain injections, and received two series of short wave diathermy treatments. Temporary relief of pain was obtained. On July 19, 1957, the patient was referred to the physical therapy clinic for a course of ultrasound therapy. At this time, the patient complained of acute pain with point tenderness over the area of the tendon of the supraspinatus muscle and marked limitation of all shoulder motions was present. The patient complained of inability to sleep through the night because of pain. The patient was given 1.5 Watts/CM ^{2} of ultrasound for 5 minutes daily. After the third treatment, the patient stated that for the first time in months he had been able to sleep through the night.

X rays taken after 7 treatments revealed almost complete absorption of the calcific deposit in the right shoulder. The patient was completely free of pain for the first time in two years. He was then given several more ultrasound treatments to complete the absorption process.

The patient has been seen several times since the final course of treatment, and has full range of abduction, forward flexion, and rotation of the right shoulder with increased deltoid muscle mass; all motion can be performed without pain. The end result was an extremely happy patient with complete usefulness of his right shoulder.

The *Review* invites case reports from physical therapists who have followed an interesting course of treatment with or an unusual response to treat-

(continued on page 837)

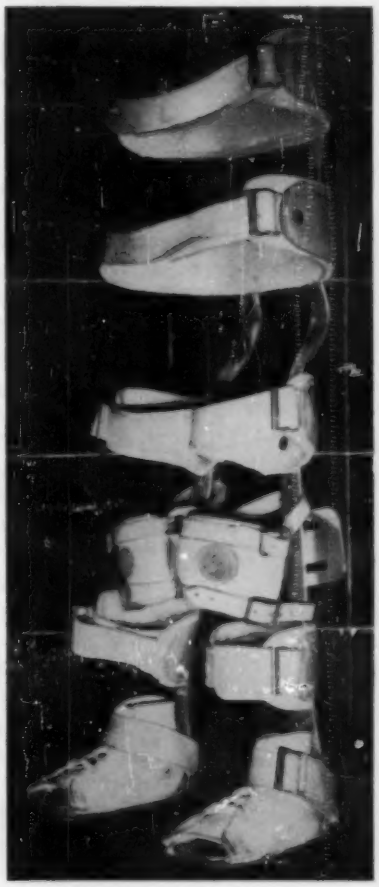
Suggestions from the Field

The "Standerupper"

Nancy D. Mahan, B.S.

One problem facing therapists in the rehabilitation of the very young patient with involvement of the lower extremities is how to achieve weight bearing and gait training with the child who has never stood or walked independently. The "standerupper" was devised to get the child on his feet and prepare him for braces. The attainment of the upright position has as much physiological and psychological value for the young child as for the adult patient and can be extremely important to the child's development.

Designed by the staff therapists of Tichenor Clinic and Metzger's Brace Shop, the brace consists of two posterior aluminum uprights with cuffs and adjustable straps at scapula and hip level to hold the trunk upright. Conventional thigh, knee, and calf cuffs are used. Knee plates are adjustable to allow for growth, and knock knee pads may be added to correct genu valgum. The distal end of the upright is extended forward 1 inch and fits into a corresponding slot made in the heel of the shoe. By using the "standerupper" the child may stand at a table for an indefinite amount of time with trunk and legs held in good position. The "standerupper" can be made for about $35.00 and one size fits most children from 1 to 2 years of age.



Senior Staff Physical Therapist, Adelaide Tichenor Orthopedic Clinic, Long Beach, California.

Editorial

Self-giving Concern

The great event in human history which the world knows as Christmas has had a profound influence on civilization extending from, and far beyond, the institutional Church, affecting every facet of human endeavor. The western world is indebted to Judeao-Christian thought for a concept of creation which freed it from superstitious fear, and for a concept of man's responsible relation to his fellow man which had been previously acknowledged only by a tiny Jewish nation in the midst of a cruel, unfeeling pagan world.

It was the Christian belief in the inherent dignity and infinite worth of the individual human being, body and soul, which led to the forerunner of today's modern hospital. The first and earliest hospitals were established and maintained by religious institutions and were little more than present day custodial rest homes. Although they were woefully short on skills, they were long on that indispensable quality which makes working with the suffering worth while—an unshakable devotion to their fellow men and a self-giving concern for others in need.

It is this same inspired, unselfish, "self-giving concern" which has motivated all good medical therapy down to today. Far too often, however, this concern has been lost, being replaced by a sterile, proficient but generally unfeeling attitude which turns a rewarding work into a chore.

Lest we be misunderstood (or not understood at all) let us examine this key word "concern" a bit more closely. Human concern includes the "professional" interest which is part of the job, but springs from a far more fundamental reality which is mindful of the whole person within the patient and makes the difference between routine physical therapy and fine physical therapy. A "concerned" physical therapist meets the needs of the patient with the skills of the profession without the uncommunicative, matter-of-fact, no-nonsense atmosphere which tries to ignore the human being within the patient. The nervous apprehension, shy questions, or belligerent bravado of the patient reveal a real need for concerned reassurance which must spring from the person of the therapist and cannot be artificially produced. False or forced heartiness rings hollow.

Editorial

This is far from a pious ideal. One does not have to observe physical therapists in action very long or talk to many patients to discover that the measure of a fine therapist is not technical skill alone (that is essential in every case). The measure is the amount of human concern which is evident in the warmth and respect shown by the therapist to the live person of the patient.

There is a broad area within which one can relate on a truly concerned level without becoming coldly proficient or artificially warm on one hand, or sentimental and emotionally involved in the plight of the patient on the other. Each is to be equally avoided. This can be achieved in part, first, by being secure enough in one's work so one does not have to be preoccupied with appearing not to know one's job. Second, one has to be secure enough as a person to be free to establish a warm human relationship which results in a job better done, satisfying to each.

When we lose our concern, we exchange our vocational purpose for something less worthy, perhaps only a way to make a living! Vocation and "concern" apparently go hand in hand. A lack of vocation reveals itself in a lack of concern. However, the reverse does not necessarily follow, for there can be many things which might block a physical therapist's desire to relate effectively as a person to a patient. If this is a "lost dimension" in one's life then a serious attempt should be made to deal with it by discussing it with a superior or wise confidant.

All of this may sound quite presumptive to be said by someone from the outside; however, one has only to substitute "clergyman" and "parishioner," or "lawyer" and "client" for "therapist" and "patient," to see that the principle of concern in human relationships applies almost universally to any professional encounter and the danger of "professionalism" always threatens.

A great theologian has written, "... The Christ ... shows what God wants man to be. He represents to those who live under the conditions of existence what man essentially is and therefore ought to be under these conditions." The statement of the One born in this season is, "he that loseth his life for my sake shall find it." This is ever true and happens not only in the confines of the religious community but wherever men and women strive to serve their fellow men selflessly. This is to be truly "concerned." This is to be truly religious, regardless of one's personal creed.

THE REVEREND JOHN M. GEENE, JR.
Alexandria, Virginia

EDITOR'S NOTE: The Reverend Mr. Geene is an Episcopal clergyman who was for several years a patient at the California Rehabilitation Center, Vallejo. He has been a source of inspiration to those patients, physical therapists, and physicians who have been so fortunate as to know him.

Association News

New Law Enacted in Massachusetts

Governor Foster Furcolo signs into law a bill regulating the practice of physical therapy in the presence of (left to right) Senator Paul H. Benoit, Charles Dunn of Boston, Representative John Armstrong; Ruth Langley, President of the Massachusetts Chapter; Mary Macdonald, former President and former Chairman of Public Laws Committee; and Sarah Bassett of Boston, Chairman of the Public Laws Committee, Massachusetts Chapter.

On September 26, 1958, Governor Foster Furcolo signed into law Chapter 585, Acts of 1958, which negated Chapter 656, Acts of 1951. The new law is designed to require registration of physical therapists who practice in the state, whereas, the 1951 law was a "permissive" law. Chapter 585 becomes effective on January 1, 1959.

Examination will be waived for those who have practiced in the state for one year between January 1, 1956 and December 31, 1958 and who apply by December 31, 1959. Those presently registered under Chapter 656 may continue to practice until current certificate expires and renew according to law.

Examination dates for 1959 will be April 14 and October 13. Those not previously licensed following an equivalent examination in another state must be examined in Massachusetts providing they are not exempt under the preceding paragraph. Applications for examination must be completed and filed with the Board 14 days before the examination date. Applications should be directed to:

Board of Registration in Medicine
State House
Boston 33, Massachusetts

Chapter News

Southern California

The president recently stated two objectives for 1958-59; namely,

To increase the interest of the members in their profession by encouraging their attendance at meetings and participation in chapter activities,

To encourage eligible physical therapists to become members of the APTA.

From the September, 1958, Newsletter

Wellington Starts Membership Drive

Wellington Anastomosis, the universal joiner, looked at his APTA Chapter and smiled—not because he was happy, but because Prexy Chas said it was going to be a big year!

"Any fool could see that," mused Wellington as he adjusted his air-cooled, cold quartz ultraviolet, grid type; "But big for who—or is it whom?"

"Mrs. Smith, don't hold your breath as you do your pelvic tilts," gently admonished Wellington. All the coming events: membership drive, state convention, legislation, professional meetings, renewed friendships, social activities whirled through his pensive brain like a bibliography out of Krusen.

"How can I help?" Wellington asked himself as he unconsciously set his quadriceps and gluteals simultaneously in conformity with accepted technic.

Having nothing more to offer, Wellington lowered his cold quartz to the "ready," adjusted his APTA shoulder patch, and sent Mrs. Smith on her way, tilting in the accepted manner.

Profoundly and with a twitch of emotion swelling in his throat, Wellington looked into the sunset's last rays reflecting off the Hubbard Tank and muttered, "I resolve to attend *all* chapter meetings this year. In this way we all can help." The drive for increased meeting attendance was on!!!!

Also from the September Newsletter:

Give to the Physical Therapy Fund, Inc.

Summer time or anytime is Salk Vaccine time. Help your Chapter—help yourself.

New York—Western District

From the September, 1958, Newsletter:

Suggestions for a Vacation

(It is a little late to suggest that you combine business with pleasure and attend the 35th Annual P. T. Conference, but it might give you ideas for the next one in Minneapolis.)

Pack a few duds, but leave all of your cares,
Bring a little food and some kitchen wares,
A sleeping bag and some hiking gear,
And a tube of 612 if mosquitoes you fear,
A camera and film to record it all,
So you can reminisce in the fall.
Take two weeks to go and two to come back
But of days of the week you'll soon lose track.
You'll see pictures "painted" with ears of corn
And dinosaurs standing in the early morn.
The Badlands and Rushmore you've heard about,
Their magnificence is something to make you shout.
You'll greet the dawn by a sylvan lake
And then a long hike you might want to take.
There'll be no place to see a stranger,
Even hairpin curves won't mean danger.
You'll wash your jeans in a fast moving stream,
Those well worn pants will really gleam.
You can climb to ski on a sunny day,
Wave to Mount Rainer a few miles away.
Lie on your skis and enjoy the sun.
It's really peaceful and a lot of fun.

MARJORY JOHNSON

38th Curriculum in Physical Therapy

The Department (curriculum) of Physical Therapy of the University of Maryland was fully approved on October 15 by the Council on Medical Education and Hospitals, American Medical Association. Congratulations to the faculty and their co-workers on the development of the program!

Gladys Wadsworth, Ph.D., serving as Educational Administrator received her Master's Degree from Teacher's College, Columbia University. She had her basic physical therapy at Walter Reed General Hospital and subsequently completed her Doctorate in Anatomy at the University of Maryland. Other physical therapists on the full-time staff are Ruth Latimer, Assistant Educational Administrator, Ruth P. Hall and Gwendolyn Clark.

CORINNE Q. WAY

Corinne Q. Way, Assistant Chief, Physical Medicine and Rehabilitation Branch of the U.S. Public Health Service, Washington, D.C., died November 4 in the U.S. Public Health Service Hospital, Baltimore, Maryland.

Miss Way received the bachelor of science degree in 1933 from the George Peabody College, Nashville, Tennessee, and her Certificate in Physical Therapy from Harvard Medical School in 1934. She had been a member of the Association since 1935, and during World War II served as a Lieutenant in the Navy. During her years of practice as a physical therapist Miss Way held positions with Harry-Anna Crippled Children's Home, Umatilla, Florida; State Dept. of Education, Akron, Ohio; Fracture Clinic of Rhode Island Hospital and the National Foundation for Infantile Paralysis, Providence, Rhode Island; U.S. Public Health Service Hospitals, Baltimore, Maryland, and San Francisco, California; and at two different times operated her own private office in her home town of Brunswick, Georgia.

The Association lost one of its outstanding and most loyal members when Connie passed away. She was an active worker in the Association and had held memberships in the Rhode Island, Maryland, and Northern California Chapters and, at the time of her death, was a member of the District of Columbia Chapter. Her affiliation with the Northern California Chapter extended over a longer period of time than did her membership in the other chapters, and it is interesting to note that at one time or another she served that chap-

ter as chairman of the following committees: Education, Placement Service, Program, Relations, and Nominating. She also served as editor of the "Newsletter" for one year, and at the time of her transfer from San Francisco in November, 1957, she was serving as a Director of the Chapter.

On the National level she served the Association as a member of the Nominating Committee in 1953 and was treasurer of the Section on Education, 1956-58.

Connie Way had a keen intellect, a sense of fair play, a strong sense of responsibility to her job or any undertaking she assumed. She had a wonderful sense of humor, and was such a loyal friend that she was an example of the finest type of womanhood. Those of us who were privileged to have her as a friend have suffered an irreparable loss with her passing.

MARGERY L. WAGNER

Mrs. Joanne Baldwin Peters passed away suddenly on September 8, 1958, in Cincinnati, Ohio. Mrs. Peters, a graduate of the University of California in 1954, was employed as a physical therapist in Fresno, California, until September, 1956 when she married Gerald E. Peters and moved to Cincinnati. Mrs. Peters was most recently employed at Christ Hospital in Cincinnati and was a member of the Ohio Chapter, Southwest District. Mr. Peters is a medical student at the University of Cincinnati.

Marriages

Sue Allman, of Crawfordsville, Ind., to Philip R. Powell, Kokomo, Ind.
Frances Brown, of St. Louis, Mo., now Mrs. Frances B. Farren, St. Louis.
Marilyn K. Clusiau, of Ely, Minn., to Bruce H. Johnson, Minneapolis, Minn.
Mary Condon, of Cleveland, Ohio, to Robert Williams, Detroit, Mich.
Mary A. Day, of Evanston, Ill., to M. A. Flood, Willmette, Ill.
Pauline Hay, of Phoenix, Ariz., now Mrs. Pauline H. Norris, Phoenix.
Sally G. Howard, of Camp Pendleton, Calif., to James G. Givens, Liverpool, N. Y.
Sara J. Jackson, of Dupo, Ill., to Michael Pronko, Kansas City, Kansas.
Gloria Kramer, of Bronx, N. Y. to Stanley C. Holt, East Lansing, Mich.
Margaret L. Langille, of Passaic, N. J., to Gerard H. Mallett, Rutherford, N. J.
Sandra Matteson, of White Plains, N. Y., now Mrs. Sandra M. MacKinnon, Mamaroneck, N. Y.
Mary Moore, of Eau Claire, Wis., now Mrs. Mary M. Brockman, Milwaukee, Wis.
Judith A. Murphy, of Brockton, Mass., now Mrs. Judith M. Merra, Brockton.
Bernice Pericin, of Hamtramck, Mich., now Mrs. Bernice P. Kostanecki, Hamtramck.
Adrienne Phillips, of Habana, Cuba, now Mrs. Adrienne P. Salazar, Habana.
Suzanne P. Phillips, of Augusta, Ga., to James W. Wade, North Augusta, S. C.
Margaret Robison, of Berkeley, Calif., now Mrs. Margaret R. MacLane, Fairfax, Calif.
Elizabeth Samuels, of Richmond, Va., to Clifford R. Green, Atlanta, Ga.
Darlene L. Scott, of Kansas City, Mo., to K. E. Stewart, Des Moines, Iowa.
Carol L. Stickle, of Kalamazoo, Mich., to Edward A. Colbeth, Baltimore, Md.
Marilyn M. Strain, of Taft, Calif., now Mrs. Marilyn S. Sward, Bakersfield, Calif.
Barbara Whitehurst, of Newark, N. J., now Mrs. Barbara W. Crews, Philadelphia, Pa.
Betty Yaki, Norwalk, Calif., now Mrs. Betty Kitabayashi, West Los Angeles, Calif.

Northwestern University Graduates

Graduation exercises of the 37th Class in Physical Therapy at Northwestern University Medical School were held at 6:15 P.M. Oct. 2, 1958, in the auditorium of the Veterans Administration Research Hospital in Chicago. Dr. Emil D. W. Hauser, Associate Professor of Orthopedic Surgery, Northwestern University Medical School, gave the address to the graduates. Dr. Richard H. Young, Dean of the Medical School, awarded the Certificates, and Louis Cotovsky, President of the Illinois Chapter, American Physical Therapy Association, presented each student with his APTA pin.

Twenty graduates in 1958 bring the total number of graduates from the course in physical therapy to 488.

INDEX TO CURRENT LITERATURE

(continued from page 810)

K. Gerloff, D. Brack, I. Hopkey, C. M. Eklund and A. W. Klotz, A.M.A. J. Dis. Child., 96: 125-130, August 1958

Response of Pregnant Women and Their Infants to Poliomyelitis Vaccine. M. M. da Silva, et al., J. Am. M. Ass., 168: 1-5, Sept. 6, 1958

RESPIRATION

The Development of Respirators. Leading Article, Lancet, Lond., 2: 305, Aug. 9, 1958

The Effect of Position on the Respiratory Rate of Newborn Infants. Harvey Kravitz et al., Pediatrics, 22: 432-435, September 1958

MISCELLANEOUS

Disseminated Lupus Erythematosus, Scleroderma, and Dermatomyositis as Manifestations of Sensitization to DNA-Protein. I. An Immunohistological Approach. W. A. Bardawil, B. L. Toy, N. Galins and T. B. Bayles, Am. J. Path., 34: 607-629, July-August 1958

Myofascial Disease. Paul Williamson, Am. Practitioner, 9: 1225-1229, August 1958

Post-Traumatic Headache. W. S. Allerton, Mil. M., 123: 126-130, August 1958

Film Libraries Where "The Return" is available

We have placed our film "The Return" with the following libraries. Most have accepted it, at others it is being previewed. It is probable that since going to press, most or all of the libraries now previewing the film will have accepted it. To obtain the film please apply first to your local film depository. In an emergency, as a last resort, the National Office will arrange to send the film to you.

A final listing of film libraries that have accepted "The Return" is expected to be published in the February 1959 issue of the *Review*.

In some cases there is a fee for the film; in some you must pay shipping and insurance charges. Please be sure to insure the film for $200.00 as the library is not responsible for the film after it reaches you.

Status of the film is indicated by the initials A—accepted, P—being previewed.

		Fees
ALABAMA		
James F. Cummings, Supervisor Audio-Visual Service University of Alabama, Ext. Div. University	P	$1.00
ALASKA		
Ruth D. Anderson Health Education Technician Alaska Department of Health Alaska Office Building Juneau	A	no fee
ARIZONA		
Venice M. Lindsay, Manager Visual Aids Bureau University of Arizona Tucson 25 (Serves Arizona, New Mexico and Nevada)	P	$.75
ARKANSAS		
E. J. Easley, M.D. Acting Director Arkansas State Board of Health Little Rock	A	no fee
CALIFORNIA		
Edith V. Krabach, Assistant Health Education Consultant State Dept. of Public Health 2151 Berkeley Way Berkeley 4	P	no fee
J. E. Lateana Film Library Supervisor University of California, Ext. Div. Berkeley 4	A	$1.50
COLORADO		
Robert de Kieffer, Director Bureau of Audio-Visual Instruction University of Colorado, Ext. Div. Boulder	A	no fee
CONNECTICUT		
Carlton W. H. Erickson Director, Audio-Visual Center University of Connecticut Storrs	A	$1.00
DELAWARE		
Howard E. Row Asst. State Supt. Secondary Education State Dept. of Public Instruction Dover	P	no fee
FLORIDA		
William J. Quinly Audio-Visual Center, Library School Florida State University Tallahassee	A	$.50—$1.00
GEORGIA		
Anne R. Crawford, Manager Film Library Georgia Center for Continuing Education University of Georgia Athens	A	no fee
HAWAII		
Fortunato Teho Visual Aids Supervisor College of Agriculture University of Hawaii Honolulu	A	no fee
IDAHO		
Allen Perry, Supervisor Audio-Visual Center University of Idaho Moscow (Serves Idaho and neighboring states)	A	$1.00
ILLINOIS		
Howard E. Hough, Chief Bureau of Health Education State Dept. of Public Health Springfield	P	no fee

		Fees
INDIANA		
Carolyn Guss Audio-Visual Center Indiana University, Ext. Div. Bloomington	P	$1.00
IOWA		
John R. Hedges Associate Director Bureau of Audio-Visual Instruction State University of Iowa, Ext. Div. Iowa City	A	$.60 plus shipping both ways
KANSAS		
Elizabeth Lawson Visual Aids Service Bureau of Visual Instruction University of Kansas, Ext. Div. Lawrence	A	no fee
KENTUCKY		
Ruby Evans Hart, Director Department of Audio-Visual Services College of Adult and Ext. Educ. University of Kentucky Lexington	A	no fee
LOUISIANA		
Cleo Alexander, Assistant Louisiana Polytechnic Institute Regional Film Library Ruston	A	no fee
MAINE		
Clarence Bergeson, Director Audio-Visual Service University of Maine Orono	A	$1.25
MASSACHUSETTS		
Anthony V. Caramello Director of Health Information Dept. of Public Health, State House Boston 33	P	no fee
MICHIGAN		
Daniel S. Lirones, Consultant University of Michigan Audio-Visual Education Center 720 East Huron Ann Arbor	A	$1.00
MINNESOTA		
Erwin C. Welke, Dept. Head Audio-Visual Extension Service University of Minnesota, Ext. Service Minneapolis 14	A	$1.00
MISSISSIPPI		
W. D. R. Stovall, Supervisor Audio-Visual Education Division of Instruction Dept. of Educ. State of Mississippi Jackson	A	no fee
MISSOURI		
C. W. Ballew, Assistant Director Visual Education Department University of Missouri, Ext. Service 23 Jesse Hall Columbia	A	$1.00 includes shipping both ways
MONTANA		
Russell Steen, Supervisor Visual Education State Department of Public Instruction Helena	A	no fee
NEBRASKA		
Lester W. Harvey, Supervisor Bureau of Audio-Visual Instruction University of Nebraska Ext. Div. Lincoln 8	P	$1.00
NEVADA		
Jerry Robinson Film Library, Agricultural Information Fleischmann College of Agriculture Reno	P	no fee
NEW HAMPSHIRE		
Mary L. Bullock, Director Film Library, Health Materials Unit State Department of Health Concord	A	no fee
NEW JERSEY		
Sally M. Clark, Assistant Visual Aids, Department of Education State Museum, State House Annex Trenton	A	no fee
NEW MEXICO		
Milton O. Johnson, Director Health Education Division Department of Public Health P. O. Box 711 Santa Fe	A	no fee
NEW YORK		
Robert M. Crist Film Library Supervisor New York State Department of Health 84 Holland Avenue Albany	A	no fee

		Fees
NORTH CAROLINA		
Roger G. Whitley, Supervisor Film Records and Equipment State Board of Health Raleigh	A	no fee
NORTH DAKOTA		
Bernardine Cervinski, Director Division of Health Education State Department of Health Bismarck	A	no fee
OHIO		
Helen Massengale, Chief Division of Health Education State Department of Health 306 Ohio Departments Building Columbus 15	P	no fee
OKLAHOMA		
Russel R. Myers Extension Specialist, Audio-Visual Education Educational Materials Services University of Oklahoma, Ext. Div. Norman	A	$.50
OREGON		
Jack N. Goodman Library Manager Dept. of Visual Instruction, Ext. Div. Oregon State System of Higher Education Corvallis	A	$1.25
PENNSYLVANIA		
Vivienne E. Cupps Assistant Director, Audio-Visual Center Chatham College Pittsburgh 32 (Serves Pennsylvania, Ohio, and West Virginia; occasionally other states)	A	$1.00
PUERTO RICO		
Jose Leavitt, Director Bureau of School Extension Department of Education Hato Rey	A	no fee
RHODE ISLAND		
F. P. Allen The Library University of Rhode Island Kingston	A	no fee; shipping cost, both ways, charged to borrower
SOUTH DAKOTA		
W. P. Wentzy, Department Head Dept. of Audio-Visual Education & Photography South Dakota State College Brookings, College Station	A	$1.00
TENNESSEE		
John T. Benton Coordinator of Film Services University of Tennessee, Ext. Div. Box 8540, University Station Knoxville (Serves entire United States)	A	no fee
Nashville Branch, Film Library Division of University Extension University of Tennessee Nashville	A	no fee
TEXAS		
Virginia C. Patterson Office of Visual Instruction Bureau University of Texas, Ext. Div. Austin 12	P	$1.00
UTAH		
W. D. Brumbaugh, Director Audio-Visual Bureau University of Utah, Ext. Div. Salt Lake City (Serves N. W. New Mexico, N. Arizona, Montana, California, Utah, Nevada, S. Idaho, W. Wyoming, and W. Colorado	P	no fee
VERMONT		
Paula Dame, Film Librarian Audio-Visual Services Department University of Vermont Burlington	P	no fee
VIRGINIA		
J. Robert Anderson, Director Bureau of Health Education State Department of Health Richmond 19	A	no fee
WASHINGTON		
Harley Jones Distribution Coordinator, Film Center University of Washington, Ext. Serv. Seattle 5	P	$1.00
WEST VIRGINIA		
Mildred P. Brain Chief Librarian Audio-Visual Department West Virginia University Morgantown	A	$.15 plus shipping both ways
WISCONSIN		
F. A. White, Director Bureau of Audio-Visual Instruction University of Wisconsin 1312 West Johnson Street Madison 6	A	$.50 plus shipping both way
WYOMING		
John D. Alford, Head Audio-Visual Department University of Wyoming Laramie	A	no fee

Original Papers for Conference

Members of the Association who have been working on special projects related to physical therapy procedures—research, clinical or laboratory; reviewing results achieved with a group of patients; adaptation or application of new methods of treatment; or any other subject which will advance the profession should plan now to report their work in Minneapolis next June.

Two copies of manuscript, typed (double-spaced), should be submitted to Dorothy E. Voss, Editor-in-Chief, *Physical Therapy Review*, by April 1, 1959. The *Review* Editorial Board will select papers to be read by members and has the prerogative of publishing those papers selected. Members will be notified of the Board's decision not later than April 25.

Lt. Col. Ruth A. Robinson Appointed Army Medical Specialist Corps Chief

Lt. Col. Ruth A. Robinson, AMSC, was appointed Chief of the Army Medical Specialist Corps November 1, 1958. She succeeds Col. Harriet S. Lee, AMSC, who has been reassigned to the Army Medical Service Historical Unit to write the history of The Army Medical Specialist Corps. [Colonel Lee served the American Physical Therapy Association as President 1952-1954 and as Director 1954-1958.]

Lt. Col. Robinson graduated from the Boston School of Occupational Therapy in 1939. From February, 1944 until May, 1948 she served as an occupational therapist with the Medical Department of the Army in a civilian capacity. After World War II she served as Chief Occupational Therapist at Brooke Army Hospital, Fort Sam Houston, Texas.

In May, 1948 she was appointed a captain in the Women's Medical Specialist Corps, Regular Army, and in August of that year was made Chief of the Occupational Therapist Section of the Corps and promoted to the temporary grade of lieutenant colonel. Lt. Col. Robinson served in this capacty until June, 1952 when she was assigned Chief Occupational Therapist at Fitzsimons Army Hospital in Denver. For the past three years, Lt. Col. Robinson was Chief Occupational Therapist at Walter Reed Army Hospital. When she assumes her new office she will be advanced to the temporary grade of full colonel.

Lt. Col. Robinson is widely known in civilian as well as military professional circles for her leadership in the field of occupational therapy. She is currently President of the American Occupational Therapy Association.

New Student Members

Albany Hospital

Kathryn A. Bele
Colonette J. Burleigh
Joan M. Craddock
Frances C. Deguire
Bayla M. Greene
Fay P. Harrold
Maureen A. LaFlame
Judy J. Lewis
Sandra C. McQuillen
Muriel J. Smith
June A. Van Denburgh
Barbara E. Weiss
Janet M. Winning

Cleveland Clinic

Audrey M. Blanc
Eileen B. Dillon
Marcia L. Dobrin
Carol L. Huber
Barbara A. Johanni
Florence E. Loehr
Judith Lytle
Donna M. Malott
Ruth E. Miller
Patricia Reichart
Sister Mary A. Carmel
James T. Thompson
Margaret A. Upstill
Ann Yunger

College of Medical Evangelists

Leonard Maniscalco

Columbia University

Judith Atterbury
Helen K. Brooks
Joan G. Brownell
Pamela J. Crooks
Joyce E. H. DeVries
Edith M. Engelen
Louise A. Fowler
Ann J. Frank
Judith L. Gale
Patricia E. C. Gunter
Lois E. Harrington
Ruth J. Heist
Roberta Howard
Barbara K. Hutt
Carl N. Lester
Judith Levitan
Susan J. MacQueen
Elizabeth E. Newman
Nancy L. Oothout
Toby S. Opolinsky
Miriam A. Pain
Travis B. Parks
Barbara V. Schad
Mary R. Schmidt
Sandra P. Snyder
Alma Sorkin
Ramona J. Steele
Margaret A. Steuer
Harriet R. Strauss
William D. Tomcykowski

Grady Vaughn School

James K. Allen
Lee D. Amundson
Martha J. James
Richard G. Knapton
George K. Mercer
Madge A. Parker
Robert N. Poynor
Tony J. Sparacino
Ann Taggart
Joe P. Thompson
Marybeth Wafer
Clarence Waters
Mary J. Weston
David L. Wyatt

Hermann Hospital

Kenneth L. Baker
Martha A. Bethel
Stanley B. Cooper
James P. Crawford
Roland K. Ecker
Jencee E. Hopkins
Odell Johnson, Jr.
Hal B. Killebrew
Benjamin F. Kubes
Judy A. McInnis
Royce L. Meyers
Maurice R. Sivertson
Michael N. Walters

New York University

Lillie G. Andersson
Marjorie A. Byron
Joseph A. Dorsey, Jr.
Judith I. Feigenbaum
Barbara M. Jenks
Stanley D. Siegelman

Northwestern University

Marilyn J. Akers
Clifford L. Boyer
Ulysses A. Buggs
George W. Cook, Jr.
Raymond E. Cunningham, Jr.
Roberta S. Ellingson
Marjorie B. Ewbank
Patricia L. Gilmore
Harold A. Karnuth
Janet L. Knudsen
Patricia R. Leary
Mary P. O'Connor
Barbara A. Poole
Lois G. Sayoc
Sister Mary D. Zupan
Sister Mary V. Kempenich
Jeanne M. Venetos

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Gloria M. Colananni
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Jeanne M. Fay
Carol S. Greenison
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Suzanne M. Hocker
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Mary A. Harris
Sue E. Hartenback
Raphael Hayes
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Barbara A. Smith
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U.S. Army Medical Service

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Billie A. Gray
Beverly A. Hubbard
Carol M. Natrop
Patricia M. Pavlis
Ruth A. Reed
Barbara A. Richardson
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Kingsley M. Miner
Liduvina A. Nabong
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Carol A. Cox
Dorothy E. Curtis
Edwin Horne
Jill P. Jones
Jacqueline M. Magee
Jeanne McClelland
Turza J. Poe
Joseph Wolfenberger

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Howard Bates
William T. Bates
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Mary E. Castor
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Andrews Dmetri
Mildred C. Elder
Diane Epstein
Eleanor L. Gass
Winslow L. Griffin
Augustus Hatzas
Barclay Hayes
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Joanna C. Hill
Nancy Hollingshead
Stephen T. Kolodziejski
N. Wayne Kressley
Herbert Laskin
John D. Lewis
Gail D. Miller
Annamae Millow
Donald C. Mills
Laura R. Perkins
Martha A. Propst
Joseph J. Rutter
Urve Saarse
J. Glenn Stroud
Ella M. Walter
Sarah E. Weimer
Gail A. Whitehead
Joseph P. Yalch

University of Wisconsin

Bonnie R. Buol
Ann T. Ferris
Corrine M. Moegenburg
John E. Pesch

Coming Meetings

January 23-24 American Society for Surgery of the Hand, Palmer House, Chicago

January 24-29 American Academy of Orthopaedic Surgeons, Palmer House, Chicago

January 27-30 American Protestant Hospital Association, Jefferson Hotel, St. Louis

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(continued from page 827)

ment by patients having one of the conditions listed below.

Raynaud's disease
Scleroderma
Dermatomyositis
Alteration of patterned movement following tenotomy
Alteration of patterned movement following tendon transference
Tic douloureux
Emphysema
Myocardial infarction
Traumatic facial nerve paralysis with postoperative repair

NOTE: Suggestions for preparation of case reports were published in the October 1957 issue of the *Review*, pages 666-667. Reprints of the suggestions may be requested by writing to the *Physical Therapy Review*.

Student Column

Tribute to a Classmate

The 1958 Physical Therapy Class of Duke University, Durham, North Carolina recently lost one of its well-loved members, Miss Marsha Paulk, of Valdosta, Georgia. Marsha died of acute leukemia on September 29, 1958, in Duke University Medical Center Hospital, after a brief illness. The funeral was held in Valdosta where her parents, a sister Pam, and brother Ashley, reside.

Marsha was the recipient of a scholarship from the Elks National Foundation to study physical therapy at Duke University. She was a student member of the American Physical Therapy Association, and following graduation in November she planned to accept a position on the staff of the Physical Therapy Department of Duke University Medical Center Hospital. She also had planned to be married in December to Charles Massey, a sophomore medical student in Duke University School of Medicine.

Marsha received her Bachelor of Science degree from Valdosta State College in December 1957. While attending Valdosta State she was elected "All Round Girl" of the Junior College and received the Outstanding Chemistry Student Award.

To know Marsha was to love her. Her radiant personality and fine character, matched by her beauty, endeared her to all who came in contact with her. Her classmates, colleagues, and large circle of friends will miss her greatly. The profession, too, has lost a fine physical therapist.

ALDA S. GAY
Student Representative, 1957-58

Student Representatives 1958-1959

California

Childrens Hospital Society
Lois Riffle
Stanford University
Beverly Webster
University of California
Parrie J. Frost

Colorado

University of Colorado Medical School
Elaine Iverson

Kansas

University of Kansas Medical Center
Jack G. Goodman

Massachusetts

Boston University Sargent College
Doris A. Raab
Julianna M. Sullivan

Michigan

University of Michigan
Vernice Moody

Minnesota

University of Minnesota
Irene D. Salk

Missouri

St. Louis University
Barbara Smith
Washington University
Patsy Newton

New York

Albany Medical College
Paula Jean Crooks
Columbia University
Toby Opolinski
New York University
Patricia Malseed
Nora A. Ramirez
University of Buffalo
Ann Calkins

North Carolina

Duke University Medical Center
Barbara Day

Ohio

Frank E. Bunts Educational Institute
Betty Dillon
Ohio State University
Virginia Matson

Oklahoma

University of Oklahoma
Jeanne McClelland

Puerto Rico

School of Physical and Occupational Therapy
Lydia Cosme

Texas

Baylor University Hospital
Lee Amundson
Hermann Hospital
Judy McInnis
Brooke Army Medical Center
Beverly Hubbard

The names of student representatives from other schools will be published as they are received in the National Office

Schools Offering Courses in Physical Therapy

APPROVED BY THE COUNCIL ON MEDICAL EDUCATION AND HOSPITALS OF THE AMERICAN MEDICAL ASSOCIATION

Schools offering the four year program leading to a baccalaureate degree accept high school graduates and transfer students. Schools offering the 12 to 16 months' program leading to a certificate accept students who have completed all or most of their undergraduate work providing they meet certain course requirements. Recipients of a degree and/or certificate have equal professional status. For specific information regarding each school's entrance requirements, curriculum, tuition and other fees, write to the physical therapy director indicated below. All students should investigate course requirements *early*.

	Degree	*Certificate*
CALIFORNIA		
Mary J. Dodge School of Physical Therapy Childrens Hospital Society 4614 Sunset Boulevard Los Angeles 27	‡	†
Ronald A. Hershey School of Physical Therapy College of Medical Evangelists Loma Linda	†	†
Lucille Daniels Division of Physical Therapy Stanford University Stanford (Palo Alto)	†	†
Margery L. Wagner Curriculum in Physical Therapy University of California The Medical Center San Francisco 22	†	†
Charlotte W. Anderson Department of Physical Therapy University of Southern California Los Angeles 7	†	†
COLORADO		
Dorothy Hoag Curriculum in Physical Therapy University of Colorado Medical School Denver 20	†	†
CONNECTICUT		
James M. Bauer Acting Director School of Physical Therapy U 101 University of Connecticut Storrs	†	
ILLINOIS		
Elizabeth C. Wood Course in Physical Therapy Northwestern University Medical School 303 East Chicago Avenue Chicago 11	†	†
IOWA		
Olive C. Farr Physical Therapy State University of Iowa Hospitals Iowa City		†
KANSAS		
Ruth G. Monteith Section of Physical Therapy Education University of Kansas Medical Center Kansas City 12	†	†
LOUISIANA		
Isadore Brown, Acting School of Physical Therapy Charity Hospital of Louisiana New Orleans 12		†
MASSACHUSETTS		
Adelaide L. McGarrett Physical Therapy Department Boston University Sargent College 785 Commonwealth Avenue Boston 15	†	†
Constance K. Greene Department of Physical Therapy *Bouvé-Boston School, Tufts University Medford 55	†	
Shirley M. Cogland *Program in Physical Therapy Simmons College-Children's Hospital 300 Longwood Avenue Boston 15	†	†
MICHIGAN		
Virginia Wilson Curriculum in Physical Therapy University of Michigan University Hospital Ann Arbor	†	†
MINNESOTA		
Darrell D. Hunt School of Physical Therapy Mayo Clinic Rochester		†
Wilbur L. Moen Course in Physical Therapy University of Minnesota 860 Mayo Memorial Hospital Minneapolis 14	†	

* Accepts women students only.

‡ Baccalaureate degree available from an affiliating college or university.

	Degree	Certificate
MISSOURI		
Sr. M. Imelda, S.S.M. Department of Physical Therapy St. Louis University 1325 South Grand Boulevard St. Louis 4	†	
Beatrice F. Schulz Department of Physical Therapy Washington University School of Medicine 660 So. Kingshighway St. Louis 10	†	
NEW YORK		
Dorothy L. McLaughlin Albany Medical College Division of Physical Therapy Albany 8	‡	†
Mary E. Callahan Courses for Physical Therapists Columbia University College of Physicians & Surgeons 630 West 168th Street New York 32	†	†
Elizabeth C. Addoms Physical Therapy Curriculum School of Education, New York University Washington Square East New York 3	†	†
Mildred F. Heap Program in Physical Therapy University of Buffalo 2183 Main Street Buffalo 14	†	†
NORTH CAROLINA		
Helen Kaiser Division of Physical Therapy Box 3403, Duke Hospital Durham		†
OHIO		
Robert D. Kruse Course in Physical Therapy Frank E. Bunts Educational Institute 2020 East 93rd Street Cleveland 6		†
Gladys G. Woods School of Physical Therapy Ohio State University University Hospital Columbus	†	†
OKLAHOMA		
Thelma Pedersen School of Physical Therapy University of Oklahoma, Medical Center Oklahoma City 4	†	†

* Accepts women students only.

‡ Baccalaureate degree available from an affiliating college or university.

	Degree	Certificate
PENNSYLVANIA		
Dorothy E. Baethke Division of Physical Therapy University of Pennsylvania 3901 Pine Street Philadelphia 4	†	†
Kathryn Kelley Curriculum in Physical Therapy D. T. Watson School of Physiatrics Leetsdale	‡	†
PUERTO RICO		
(All classes given in Spanish) Lutgarda V. Piñeiro School of Physical & Occupational Therapy Candelaria & Mandry Streets Stop 22, Santurce	†	†
TEXAS		
Doris E. Porter Grady Vaughn School of Physical Therapy Baylor University Hospital Dallas 1	†	†
Cecelia J. Lee School of Physical Therapy Hermann Hospital Houston 25	‡	†
Ruby Decker School of Physical Therapy The University of Texas Medical Branch Galveston	†	†
VIRGINIA		
Susanne Hirt School of Physical Therapy Medical College of Virginia Richmond 19	†	
WISCONSIN		
Beth J. Phillips Curriculum in Physical Therapy Marquette University School of Medicine 561 North 15th Street Milwaukee 3	†	
Margaret Kohli Course in Physical Therapy University of Wisconsin Madison 6	†	
U. S. ARMY MEDICAL SERVICE		
*Physical Therapy Course Army Medical Service School Brooke Army Medical Center Fort Sam Houston, Texas Write to: The Surgeon General Department of the Army Washington 25, D. C. Att.: Personnel Division		†

Please direct all inquiries regarding tuition, entrance requirements and other specific information to the school and *not* to the American Physical Therapy Association.

Abstracts

Observation on Hemiplegia with Middle Cerebral Artery Trunk Occlusions and with Normal Carotid Angiograms

J. E. Webster and E. S. Gurdjian, NEUROLOGY, 8: 645-649, August 1958

In a study of 200 hemiplegic or hemiparetic patients there were 16 examples (8 per cent) of occlusion of the middle cerebral artery and 33 patients (16 per cent) having "normal" angiograms. This paper analyzes these two groups in conjunction with neurologic and electroencephalographic studies, together with observations upon responses to compression of the carotid artery in the neck.

Occlusion of the middle cerebral artery trunk was usually found to be associated with profound hemiplegia, with or without aphasia. The degree of paralysis was uniform and striking. Carotid compression tests in these patients usually failed to produce syncope; whereas, with occlusion of the anterior cerebral artery (or the carotid), syncope occurs in about 66 per cent upon compression of the contralateral carotid artery. In patients with occlusions of the middle cerebral trunk this incidence is only 15 per cent.

The group of patients with middle cerebral artery trunk occlusion was not as large as that of hemiplegics who presented "normal" carotid angiograms. As in group one, carotid compression usually did not induce a syncopal response. The etiology was thought to be due to involvement of the smaller arterial branches supplying the cortex and subcortex.

When a well defined hemiplegia is not associated with a syncopal effect on carotid bifurcation compression on the same side as the hemiplegia, a diagnosis of middle cerebral artery trunk occlusion or occlusion of the terminal vessels in the distribution of the middle cerebral (normal angiogram) should be considered. The explanation for this may be found in the fact that the middle cerebral artery has the greatest share in the blood supply to the basal ganglia and internal capsule.

The observation that syncope does not usually occur in patients with middle cerebral artery trunk occlusion, or among those with hemiplegia but with "normal" carotid angiograms, suggests that the ganglionic branches of the middle cerebral artery do not subserve the conscious centers which the anterior cerebral artery and the basilar-posterior cerebral complex fulfill.

This study found that 1) patients with hemiplegia or hemiparesis may frequently be found to have either an occlusion of the trunk of the middle cerebral artery or "normal" angiograms; 2) When the middle cerebral artery distribution is involved in causing the hemiplegia, the carotid compression tests are usually negative; 3) This response is contrary to the syncopal state which usually occurs (80 per cent) upon contralateral carotid compression with occlusion involving carotid, anterior cerebral and basilar-vertebral vessels.

Exercise-Tolerance Tests

E. A. Harris (Liverpool, England), LANCET, LOND., 2: 409-411, Aug. 23, 1958

The author is concerned with finding an objective test to measure the capacity for physical exertion in patients with cardiopulmonary disease. An evaluation of the degree of impairment in such patients at any given time is usually made on the basis of the clinical history; but this information is unobjective in that it can be influenced by the motives, personality and intelligence of both the physician and the patient. A reliable, simple, and safe, "exercise-tolerance test" would be very useful to the physician for measuring the impairment of capacity for physical exertion in persons with cardiopulmonary disease. The author states that an ideal test has not yet been devised.

A review and evaluation of existing exercise-tolerance tests is presented. Most of these tests have been used to measure fitness for athletic, industrial, or military purposes.

The first group of tests surveyed are those based on ventilatory measurements and include: the ventilatory equivalent, respiratory frequency, and the Hugh-Jones test. These tests may not be completely reliable because measurements of ventilatory capacity may be subject to the patient's voluntary control.

The second group of tests described are those based on records of heart rate and include a number of tests which measure the recovery heart rate and also the heart rate during exercise. These tests may be put on a more rational basis as more is discovered about the mechanisms of tachycardia of exercise. At present, however, none of these can be recommended for clinical use since they are either not well understood or require a maximal effort from the patient. Maximal effort from a patient with cardiac disease might prove dangerous.

The third group of tests are based on measurements of oxygen consumption or oxygen debt. The one involving measurement of oxygen debt seems to be the test which could be most valuable from the clinical standpoint since it is objective and does not require maximal effort from the patient. However, further study and development is necessary since in some cases oxygen debt may not reveal the patient's true disability.

The author concludes that the time has come to use knowledge of exercise physiology and pathophysiology to see whether a reliable exercise-tolerance test can be devised for clinical use. The measurement of oxygen debt after standard exercise appears to be the most promising as a basis for a test of exercise-tolerance, but it probably cannot supersede measurements of ventilatory data or heart rate.

The Immobilization of Fractures

Joseph L. Fleming (Henry Ford Hospital, Detroit, Michigan) INDUST. M. & S., 27: 410-412, August 1958

The statement that a fracture should be immobilized "until it is healed" is essentially correct; its only fault is in its incompleteness. It does not answer the questions—healed for what or healed for whom? The time allowed for healing may be dependent on the patient's age or occupation. It may depend upon whether the bone is one used for weight bearing or movement. As the situation varies so must the treatment. Proper management of a fracture consists of determining the temporal relationship between adequate immobilization and functional restoration.

Anterior dislocations of the shoulder joint in older people must be mobilized earlier than in the young as periarthritis and frozen shoulders are frequently complications in the older group.

In fingers malunion and stiffness

are feared more than nonunion; therefore, the time of immobilization should be minimized. Only the actually fractured bones and their adjacent joints should be immobilized so that nearly full function of the remaining fingers is possible. A short period of specific rest and early movement is the best therapy. On the other hand, fractures of the carpal scaphoid require prolonged immobilization as nonunion is more of a problem than stiffness.

Dislocations and fractures of and near the elbow joint require extreme caution in exercise. Tearing of the closely approximated muscle fibers may cause minor hemorrhages and result in myositis ossificans and progressive stiffness. The author states that it is a good rule never to send an elbow injury to physical therapy for mobilization. The patient can do better and safer exercise himself, if properly instructed. Forced manipulation or passive stretching of the elbow in these patients may result in decreased motion or even complete fusion.

The worst complication of a Colles fracture is stiffness of the hand and shoulder. The primary aim of treatment is to avoid these disasters. This is *not* accomplished by early mobilization of the fracture. The hand can be better exercised if the painful wrist is immobilized properly. The wrist will limber up provided the hand is kept flexible.

In fractures of long bones not involving joints, union is the main objective and nonunion the main complication. Stiffness of a mild degree is not so disabling in the lower extremity as in the upper and is less likely to be permanent. The prime functional requirements of the upper extremity are mobility and facility; in the lower extremity stability and endurance.

In fractures involving joints malunion and stiffness are the main complications. Surgery is often indicated to restore the joint. Secure fixation can be obtained and nonweight-bearing exercise begun as soon as sutures are removed.

Proper use of a walking cast in injuries of the foot and ankle is advantageous as it results in quicker return to normal activities and minimizes reflex sympathetic dystrophy. Walking casts must not be used indiscriminately or prematurely, however, as in certain ankle fractures severe disability may result from this practice.

The author states that the one private rule of thumb relative to the immobilization of fractures is—if union is questionable, continue immobilization. If union is present but not advanced, continue protection but use a bivalved cast to allow motion at frequent periods.

A planned approach designed for the individual patient will afford the best results in the treatment of fractures.

Gravitational Leg Ulcers in the Elderly

Stanley Rivlin (London Varicose Clinic, London), LANCET, LOND., I: 1363-1367, June 28, 1958

This paper is based on a study of 200 cases of gravitational ulceration of the leg, 93 of them in patients over 60 years of age. "Gravitational ulcer" is a term devised to emphasize the production of edema in the lower limb when the heart is at a higher level than the leg.

The most important consideration in healing leg ulcers is the reduction of edema; consequently all treatment is aimed at this problem. The most direct way of banishing edema is to tip the patient so that his legs are higher than his heart. A man sitting up in bed will not lose his pitting edema, and it may not disappear even if he lies down. This is why so many ulcers fail to heal in bed. The foot of the bed must be raised 9 inches and the patient must lie flat with only one pillow under the head before the heart can be guaranteed to be below the level of the leg. The author states that with this treatment it is necessary to have constant supervision by an enthusiastic physical therapist in order to maintain range of motion or one is liable to end up with a healed ulcer in a desiccated mummy. The patient too must play his part, persevering with exercise at the ankle joints to revive calf muscle action.

This is not a simple treatment and has many disadvantages. It was followed in only 3 of the 200 cases in this study. In most cases the emphasis in treatment is therefore placed on ambulation and normal use of the limb. By proper walking, the action of the calf muscles pumps out the "swelling" from the leg. Rest does far more harm than good. Sitting in a chair with the legs up on a stool impairs venous return and is harmful.

The author also recommends and describes special adhesive compression bandaging. Bandaging speeds up the healing process by taking up the slack left by the vanishing edema and prevents its return during periods of inactivity. While under bandage treatment, each patient is given a card with the following recommendations:

1. Avoid standing still.
2. Wear lace-up shoes, never slippers.
3. Do not sit with your legs crossed.
4. Do not sit with your legs out in front of you on a stool.
5. Sit normally but move your legs up and down every now and again.
6. Walk as much as you please.
7. Do not sit close to the fire.
8. Never bathe in the morning—only at night.
9. Raise the foot of the bed on 9 inch blocks.

The standard method of treatment at the London Varicose Clinic consists of an adequate initial history and examination to classify the type of ulcer present, ambulation in proper footwear, and adhesive compression bandaging. Under this program the author's experience has shown that varicose ulcers can be expected to heal in 10 weeks, postthrombotic and miscellaneous ulcers in 13 weeks.

The Chronic Respirator Patient

Annotations, LANCET, LOND., 2: 405-406, Aug. 23, 1958

Respiratory paralysis in poliomyelitis patients continues to be a problem of long-term patient care. However, the amount of medical care is decreased by devices that make the patient more self sufficient. This not only boosts patient morale but eliminates constant care by other persons.

Patients who can breath only a few minutes without aid must continue to use either tank respirators or receive intermittent positive pressure through permanently opened tracheotomies. On the other hand, patients who can breath a few hours without artificial means may use special breathing jackets worn in wheel chairs. Tracheotomies may be closed in these patients, thus eliminating possible pulmonary infection. In either type of patient glossopharyngeal "frog" breathing is beneficial.

With the decrease or elimination of respiratory embarrassment the patients in breathing jackets learn

to use the typewriter, turn pages, etc., thus becoming partly self sufficient even though there might be little or no strength in the upper extremities. Therefore, patients who in the past were considered to be burdens to society may now lead seminormal lives or at least feel some sense of independence.

Pigeon Breast — Congenital Chondrosternal Prominence

Henry A. Brodkin (Newark Beth Israel Hospital, Newark, New Jersey), A.M.A. ARCH. SURG., 77: 261-270, August 1958

This paper supports the theory that pigeon breast is a deformity that is congenital and produced during infancy by abnormal, unbalanced contractions of an abnormally developed diaphragm.

The normal thorax of the newborn in humans is round, bell-shaped, and practically inert. During the period of infancy the thorax becomes ovoid with the elongation in the transverse diameter. This conversion must be influenced by the change from the recumbent to the standing position, particularly when the infant begins to walk and increases his activity. A review of some of the anatomic and physiologic features of the chest and diaphragm is included as a basis for the explained cause of a pigeon breast.

Pigeon breast is characterized by a protrusion of the chondrosternal area. The commoner form, chondromanubrial prominence, is characterized by a protrusion of the manubrium and adjoining first and second cartilages and a vertical or depressed gladiolus. The second form, termed chondrogladiolar prominence, closely resembles the chest of the quadripedal animals. The thoracic circumference is pear-shaped, gradually tapering forward to the protruding sternum. The lower anterior thorax and gladiolus project forward, so that the gladiolar-xiphoid junction is the most prominent part of the anterior chest wall. These deformities are produced by a pull on the anterior chest wall attachment of the diaphragm resulting from unbalanced contractions of an abnormally developed diaphragm. This abnormal diaphragm is usually characterized either by a comparatively stronger musculature of the lateral segments or by a weak, underdeveloped musculature of the anterior segments.

Following the described surgery the chest assumes a normal contour because the abnormal pull on the anterior chest wall has been neutralized and the radiating forces of the diaphragmatic contractions have been brought into balance. These results then, support the diaphragmatic theory of the etiology and pathogenesis of this condition.

Physiologic Defects in Chronic Bronchitis

A. Renzetti, G. Eastman, J. Auchincloss, R. Gilbert, R. Eich and R. Dutton (Pulmonary Disease Division of the Veterans Administration Hospital, Syracuse, New York), AM. REV. TUBERC., 78: 191-202, August 1958

Chronic bronchitis is usually considered of minor medical significance since it produces little or no disability. As the etiology and natural history of emphysema are unknown, a study of subjects with bronchitis was undertaken to see if it would give some significant factors in the development of emphysema.

Forty-four patients with chronic bronchitis were subjected to a physiologic study. Chronic bronchitis was defined as a condition characterized by a cough which occurs at least 10 times a day every day for at last 6 months in the absence of any other bronchopulmonary disease. The presence of any other lung disease as determined by X ray or clinical examination was a cause for exclusion from the study.

After pulmonary function testing, 8 of the patients were considered to have chronic pulmonary emphysema. This was considered to be present when the ratio of residual to total lung volume was greater than 35 per cent, together with a normal or greater than normal total lung capacity.

Twelve people who had no cough or other evidence of disease by history, examination, and X ray, served as a control group for the physiological studies. The test results of the 3 groups were compared and graphed. They indicated that people with chronic bronchitis have abnormal intrapulmonary distribution of inspired air and/or a disproportion between alveolar ventilation and perfusion in some parts of their lungs. The defects give rise to mild abnormalties in oxygen transfer. The findings have been interpreted as evidence of bronchiolar obstruction in this group.

The authors feel that in view of the type and incidence of functional abnormalities, some of the patients are in an early phase of the natural history of chronic pulmonary emphysema. The subjects are to be restudied over a period of years.

The Guillain-Barré Syndrome with Special Reference to Respiratory Paralysis and Recurrence

W. Wolfenden and A. McGuinniss (Sydney Hospital, Sydney, Australia), MED. J. AUSTRALIA, 5: 163-165, Aug. 2, 1958

The Guillain-Barré syndrome and its management are reviewed with special reference to recurrence and the complications of respiratory paralysis. The article is introduced by a discussion of the etiology of the syndrome. This is followed by a description of the pathology and resulting symptoms.

In discussing the management it is stressed that respiratory paralysis is a major complication of the disease and necessitates meticulous observation for its early detection in patients with rapidly progressive polyneuritis. The progress of the paresis must be noted carefully and chest expansion and talking tolerance assessed. The advantage of intermittent positive pressure respiration after tracheotomy over the tank respirator is discussed. It is stated that physical therapy is important. With these patients it would include adequate postural drainage and percussion and vibration applied to the chest.

The authors present a case which demonstrates the Landry-Guillain-Barré syndrome progressing to respiratory paralysis. Intermittent positive pressure respiration was started immediately after tracheotomy because of subjective difficulty in breathing. The eventual recovery was complete. Comments are added on the value of the Bennett's Pressure Breathing Therapy Unit in cases in which respiratory paralysis is not complete. The rate of respiration is governed entirely by the patient's own respiratory center. The patient's inspiratory effort is sufficient to activate the machine, which then blows an air-oxygen mixture into the lungs until a preset pressure is reached, when it cuts out and allows expiration to occur passively.

Therapeutic Exercises for Teen-age Dysmenorrhea

L. J. Golub, W. R. Lang, H. Menduke, and O. Brown (Jefferson Medical College, Philadelphia, Pennsylvania), AM. J. OBST., 76: 670-674, September 1958

A study concerning teen-age dysmenorrhea was done on 5,324 Junior High School girls, comparing the relative merits of Mosher's breathing, leg, and abdominal exercises, to those of Billig, who advocated stretching exercises. Nineteen schools were included in the research. Each school divided the girls into two groups, one of which was taking the Billig exercises, while the other group was taking the Mosher exercises.

The exercises were given for a period of 6 months to 2 years. The study ran for a period of 8 years, from September, 1948, to January, 1957. Records and follow-ups were done with the aid of the physical education instructors.

Results show that 74 per cent were cured or improved by the Billig exercises, and 76 per cent by the Mosher exercises. The 2 per cent difference was considered insignificant. However, since other studies show that good results are obtained in a wide variety of procedures, and that the per cent of cure is the same without treatment, this study showed no evidence that the exercises affected the rate of total cure. Since no control group was used, further study on the subject is recommended.

School to school differences were noted and were assumed to be the result of poor motivation by some of the instructors and students. It is not recommended that these exercises be discontinued, as some of the improved cases might possibly have been aided by the exercises.

The advantages of these exercise programs are that they can accommodate a large group; no expensive medication is necessary; they are preferable to surgery; and they can be continued for a long period of time.

Our Abstracters for December

We are indebted to the following Association members for their assistance in the preparation of the abstracts appearing in this issue:

Rachel Adams — Carole McNeill
Ethel Coeling — Florence Murley
Corinne L. Strong

Book Reviews . . . . .

Understanding Your Patient. *Edited by Samuel Liebman, M.D., Medical Director, North Shore Hospital, Winnetka, Ill.; Clinical Professor of Psychiatry, University of Illinois College of Medicine. Ten Contributors. Cloth; price $5.00. Pp. 170. J. B. Lippincott, Philadelphia, 1957.*

This book, the third in a series, is written primarily to help physicians recognize emotional problems encountered daily in their patients. It offers many suggestions and methods whereby the general practitioner may provide his patient with more understanding, guidance, and treatment.

Each of the 10 contributors, all recognized authorities in the area of psychiatry, writes a chapter on his special knowledge of the field. Although written with the general medical practitioner in mind, this book offers information which the physical therapist will find pertinent and applicable. The cases cited with their problems and solutions, are similar to those encountered in physical therapy departments, and the technics suggested for patient approach could be easily adapted by the physical therapist.

The scope of this small volume encompasses emotional problems that may develop at various age levels from birth through maturity. Three chapters are devoted to premarital counseling, marriage counseling, and problems related to grandparents. The authors have presented their material in language that is simple and easily understood, and the many case studies add interest. Each chapter contains a comprehensive bibliographical listing of references for supplemental reading on the various subjects.

This book could be highly useful as a reference for persons working with patients who need guidance to understand some of their maladjustments but who are not disturbed severely enough to require psychiatric counseling. The authors do not suggest that the patient be treated for severe disturbances by all medical personnel, but rather that persons most closely connected with the treatment of the patients should, through better understanding of emotional problems, be assisted to recognize symptoms in their patients which necessitate referral to a psychiatric service. It is emphasized throughout the book that during the treatment session much help can be given to the somewhat disturbed patient, through listening to him, by having an understanding attitude, and by encouraging him to be self reliant.

The Anatomy of the Locomotor System. *By R. G. Inkster, Reader in Anatomy in the University of Edinburg; Robert Walmsley, Bute Professor of Anatomy in the University of St. Andrews; and R. D. Lockhart, Regius Professor of Anatomy in the University of Aberdeen. Vol. II. Cloth; price $9.00. Pp. 508; illus. Oxford University Press, New York, 1957.*

This is a reprint of three sections of the Ninth Edition of Cunningham's *Textbook of Anatomy, 1951*, consisting of the section on Osteology by Inkster; the section on Arthrology by Walmsley; and the section on Myology by Lockhart. Each section covers its respective subject completely and may be used independently of other portions of the text. This volume has a table of contents for the material covered in the three sections, and has the complete index of the original textbook. A table of page numbers is used with the index to indicate the volume containing desired pages.

Four volumes of separate sections of the original textbook are available: Volume I, Human Embryology; Volume II, The Locomotor System; Volume V, the Nervous System; and Volume VI, Surface and Surgical Anatomy. Division of the original massive textbook into several volumes, provides books of convenient size to handle and provides saving in purchase price where only part of the textbook is needed.

Volume II, *The Locomotor System*, is a complete textbook and reference book of systemic anatomy of the bones, joints, and muscles. It is profusely illustrated with photographs, radiographs, and anatomical drawings. Each section is divided into subsections in accordance with anatomical division. Leading paragraphs are titled with heavy print. This lends to the book the characteristics of a well organized outline. Within the paragraphs, names of specific anatomical structures are in heavy print and names of general types of tissues are in italics. This

permits quick scanning of pages as one seeks information.

The book will be useful to those who desire a small book for ease of handling and for those who need only this portion of the material in Cunningham's *Textbook of Anatomy*.

Handbook of Orthopaedic Surgery. *By Alfred Riveo Shands, Jr., M.D., Medical Director of the Alfred I. duPont Institute of the Nemours Foundation, Wilmington, Delaware, in collaboration with Richard Beverly Raney, M.D., Professor of Surgery in Orthopedic Surgery, University of North Carolina, Chapel Hill; Lecturer in Orthopedics, Duke University School of Medicine, Durham. Ed. 5. Cloth; price $9.75. Pp. 725; illus. C. V. Mosby, St. Louis, 1957.*

This is the fifth edition of a handbook which in 20 years has so well fulfilled the author's original purpose of presenting the basic facts and principles of orthopedic surgery that it is familiar to and appreciated by everyone concerned with this speciality.

Revision has consisted principally of the addition of 17 short new sections, rewriting of the chapter on Congenital Dislocation of the Hip, and substituting photographic illustrations for many of the line drawings used previously. The bibliography of the literature in English, containing over 1,400 references, has been revised and brought up from March 1, 1952, to September 1, 1956.

There is no question that this hand book will continue to be of real value for both teaching and reference.

Electrodiagnosis and Electromyography. *Edited by Sidney Licht, M.D., Twelve Contributors from the British Association of Physical Medicine, Danish Society, and French National Society of Physical Medicine. Cloth; price $10.00. Pp. 272; illus. Elizabeth Licht, Publisher, New Haven, Conn., 1956.*

This text, the first to be published which deals with both electrodiagnosis and electromyography, is primarily directed to physicians—especially physiatrists—with a twofold purpose. First, to give a comprehensive orientation to the area of electrodiagnosis in capsule form and, second, to stimulate the physician to assume his role as a specialist in this area rather than delegate his responsibilities completely to therapists. It is an excellent book for this purpose, well written, containing illustrations, charts, and tables and an adequate bibliography for each chapter to supplement and further clarify the text. Physical therapists engaged in electrodiagnosis will also find this a most enlightening and helpful text.

The extensive personal experience of the 12 contributing physicians well qualifies them for the preparation of a book of this nature. The writers offer the reader a systematic introduction to the subject beginning with fundamental facts about electricity, electrical apparatus, physiology of muscles, applied neurophysiology and the theory, method, interpretation, and limitations of all tests undertaken.

The inclusion of a short chapter on electroretinography, a procedure only recently used, makes the book up-to-date.

The readability of the chapters varies with the topic covered, and with the educational background and experience of the respective authors. In some areas an extensive knowledge of electroneurophysiology is necessary.

This is without question a much needed book and is of superior quality. Physicians and physical therapists will find that it is not a text for quick perusal but one to be used as a basis for serious study and reference.

Physical Methods in Physiology. *By W. T. Catton, M.Sc., Physiology Department, King's College, Newcastle-upon-Tyne. Cloth; price $10.00. Pp. 375; illus. Philosophical Library, New York, 1957.*

This is a small British reference book containing an account of the various experimental methods popular in physiology laboratories at the present time. It is a compact book of convenient size, 5 inches by 7½ inches. There are 7 chapters, a list of symbols, and 11 plates. The text is well illustrated by graphs, formulas, and equations. The literary form is good and the type is easily read.

The author has presented, in an abbreviated form, some of the technics of measurement required in experimental investigation of a physiological nature. He has included some elements of biophysics which add to the exactness of the procedures presented. The systems presented are blood, circulation, respiration, muscle, peripheral nerve, body heat exchange, and electronics in physiology. Topics on which there is much specialized literature have been omitted, e.g., electrocardiography, electroencephalography, and special senses.

This is exclusively a book for active experimental physiologists and would be a useful addition to a reference library. Its limitations should be recognized, however, and these are: 1) it is not a complete coverage of all of the systems of the human body; and 2) it is not as current as it could be, particularly in the section on respiration.

A physical therapist engaged in graduate study who has interest in physiology and biophysics, being well informed in these subjects, may find this a helpful reference. It is an excellent source of measurement methods for one who is looking for quantitative technics. Almost half of this book is devoted to the areas of muscle, peripheral nerve, and electronics in physiology.

Pathology. *Edited by W. A. D. Anderson, M.D., F.A.C.P., F.C.A.P., Professor of Pathology and Chairman of the Department of Pathology, University of Miami School of Medicine; Director of the Pathology Laboratories, Jackson Memorial Hospital, Miami, Florida. Cloth; price $16.00. Pp. 1402; illus. C. V. Mosby, St. Louis, 1957.*

The previous editions of the book in 1948 and 1953 were accepted as being among the better textbooks by students and teachers of pathology. The present edition is of similar quality with sufficient coverage of the subject to assure it a selected place among the existing textbooks of pathology.

The book's 45 chapters are written by 34 authors who are experienced and highly qualified in their fields. The text is well organized with ample and good illustrations, an excellent index, and an up-to-date list of references in all subjects. The relative space devoted to general and special pathology is about one to two chapters, so that the important basic phenomena of all major disease processes are adequately covered. The readers can easily understand the morphologic changes produced in tissues and the clinical manifestations expected from these changes.

This edition of the book is of superior quality and certainly com-

pares favorably with other textbooks of pathology. Pathologists, clinicians, and students will find it useful.

Clinical Heart Disease. *By Samuel A. Levine, M.D., F.A.C.P., Clinical Professor of Medicine, Harvard Medical School; Physician, Peter Bent Brigham Hospital and New England Baptist Hospital; Consultant Cardiologist, Newton-Wellesley Hospital, Boston. Ed. 5. Cloth; price $9.50. Pp. 673; illus. W. B. Saunders, Philadelphia, 1958.*

The fifth edition of this standard text on clinical management of common forms of heart disease incorporates the known advances that have taken place in this field during the past several years. The format of the book is unchanged and the author's style remains as delightfully refreshing as it was 20 years ago. The text likewise is prima-facie evidence against the current lamentable trend in medical writing, i.e., compilation of books by Committees. Although the section on clinical electrocardiography has another author (Harold D. Levine, M.D.), it is in fact a separate text contained within the covers of the book which thus escapes the charge of "Authorship by Committee."

Since modern electrocardiography constitutes the basis for diagnosis and management of heart conditions and diseases today, this section of the volume is quite properly considered first. The normal electrocardiogram with its precordial and vectorcardiogram tracings are described in detail, followed by descriptions of abnormal tracings, also in considerable detail. Examples of tracings, reproduced with a surprising degree of exactitude, illustrate each point so that this section presents a fine introduction or a quick review of the subject which the reader will find instructive or informative.

The basic portion of the text presents in simple, usable form the important aspects of the diagnosis, prognosis, and treatment of heart disease. The author makes no attempt to cover in detail the entire field of cardiovascular disease and many theoretical considerations of the subject are purposely omitted. This results in a text which the average examining physician or general practitioner will find extremely helpful in dealing with clinical problems at the bedside or in the casualty room.

The format of the book discusses each type of heart disease as an entity, in all pertinent clinical aspects, the pages devoted to treatment aspects being especially helpful. Treatment regimens are clearly outlined and furnish details of practical, proven methods of management for the clinical entity under consideration. These portions of the text may easily prove to be most valuable to the average reader. One aspect of management, the role of exercise, is conspicuously absent, a fact that the physical therapist and physiatrist will find lamentable; otherwise, the text is easily read, and will be of real value to those involved in the clinical management of this group of conditions and diseases.

The Principles of Exercise Therapy. *By M. Dena Gardiner, F.C.S.P., Teacher, Chartered Society of Physiotherapy; Deputy Principal of the London Hospital School of Physiotherapy. Chapter on Proprioceptive Facilitation, by Monica Martin Jones, M.C.S.P. Ed. 2. Cloth; price $4.00. Pp. 295; illus. Macmillan Co., New York, 1957.*

This is a comprehensive book on exercise, containing almost all of the general technics, definitions, and procedures in the exercise field. It is well classified, briefly yet clearly presented, and arranged according to the purpose for which the exercises are designed. The sections on technic are preceded by wisely selected, concise principles. The author, obviously experienced in teaching, has the facility of brevity, simple language, and clear examples.

Part I is devoted to mechanical principles, definitions, and classifications. Part II is entitled Relaxation; Part III, Joint Mobility; Part IV, Muscle Power: Part V. Neuromuscular Coordination. Part VI includes Group Work and Patient Instruction.

A book on exercise by an English author usually contains some references to the Swedish gymnastics of Peter Henry Ling (one of the fathers of Therapeutic Exercise in the United States as well as England), and this is no exception. There is a chapter on Swedish Remedial Exercises, and some of the terminology, although adapted and modified by time, is found throughout the book. It has, however, a minor place.

Of contemporary interest is the chapter on Proprioceptive Facilitation by Monica Martin Jones, M.C.S.P. This is an excellent and concise summary of the method devised by Dr. Kabat and Margaret Knott in California. Because of its necessary brevity, the important points of the system stand out clearly and are easily understood. It is helpful preliminary reading to the book *Proprioceptive Neuromuscular Facilitation*, by Knott and Voss.

This book should be helpful to students of physical therapy—to the students currently in the classroom, whose problem is discriminating assimilation of mass material, and to the perpetual students in the field who review fundamentals from time to time and who often desire a quick reference to a specific problem.

The reviews published here have been prepared by competent authorities and do not necessarily represent the opinions of the American Physical Therapy Association.

Our Book Reviewers for December

Rheta C. Adams, Associate in Physical Therapy, School of Auxiliary Medical Services, University of Pennsylvania, Philadelphia.

Mary E. Callahan, Director, Training Course for Physical Therapists, College of Physicians and Surgeons, Columbia University, New York.

Dorothy M. Dean, Physical Therapy Center, Bellevue, Washington.

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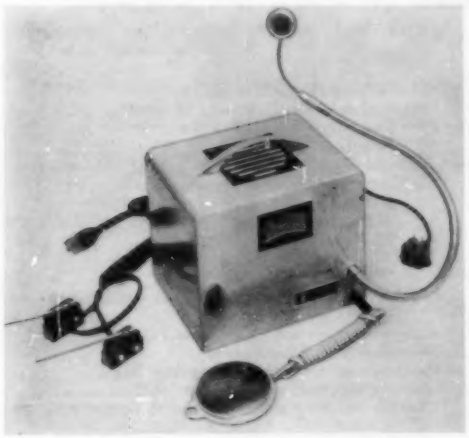
Thomas C. Laipply, M.D., Professor of Pathology, Northwestern University Medical School, Chicago.

Oscar O. Selke, M.D., Director of Physical Medicine and Rehabilitation, Hermann Hospital, Houston, Texas.

Catherine Warren, Chief Physical Therapist, Peter Bent Brigham Hospital, Boston.

What's New .....

121. Rehabaphone



Rehabaphone makes telephoning possible for persons with little or no muscle power. The device can be used by anyone able to press, in any way, against the lever of a sensitive microswitch. The unit can be operated by muscles normally used to smile or wink; by bulging out the cheek with the tongue; by opening and closing the mouth; by clenching the teeth; or by motion of the chin, hand or foot. Seeger-Williams, Inc.

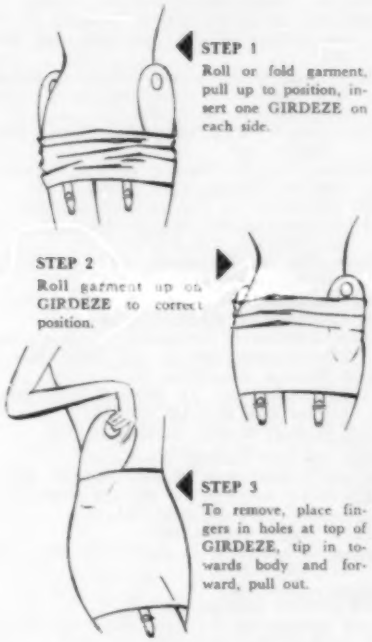
122. Muscular Dystrophy Booklet

Public Affairs Pamphlet No. 271, *Out of the Shadows*, by Elizabeth Ogg contains 28 pages of educational information on muscular dystrophy. The disease, its after effects, treatment, and needs for research are discussed including pertinent comments on physical therapy. The pamphlet is available at 25 cents per copy from Public Affairs Pamphlets.

For more information on items write to The Physical Therapy Review, 1790 Broadway, New York 19, N. Y.

New items which may be of interest to physical therapists will be mentioned in these pages each month. The accompanying explanations are made by the manufacturers and have not been investigated by the *Physical Therapy Review*.

123. Girdeze


STEP 1
Roll or fold garment, pull up to position, insert one GIRDEZE on each side.
STEP 2
Roll garment up on GIRDEZE to correct position.
STEP 3
To remove, place fingers in holes at top of GIRDEZE, tip in towards body and forward, pull out.

Girdeze is an aid to help you slip into your girdle or swim suit and make it more pleasant and comfortable to wear. It stops tugging and straining, keeps from pinching flesh. Shaffer Mfg. Co.

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(continued on next page)

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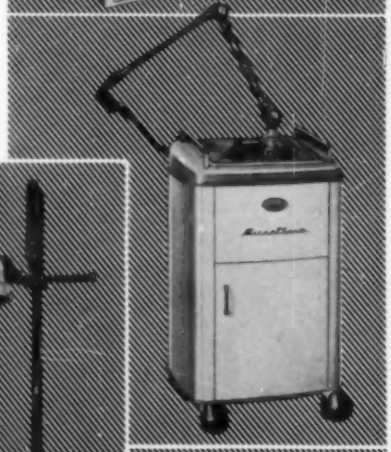

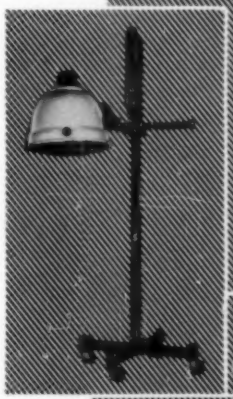

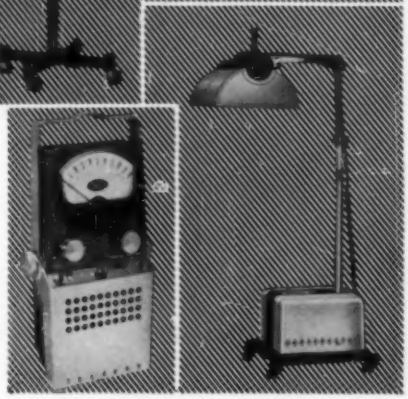

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